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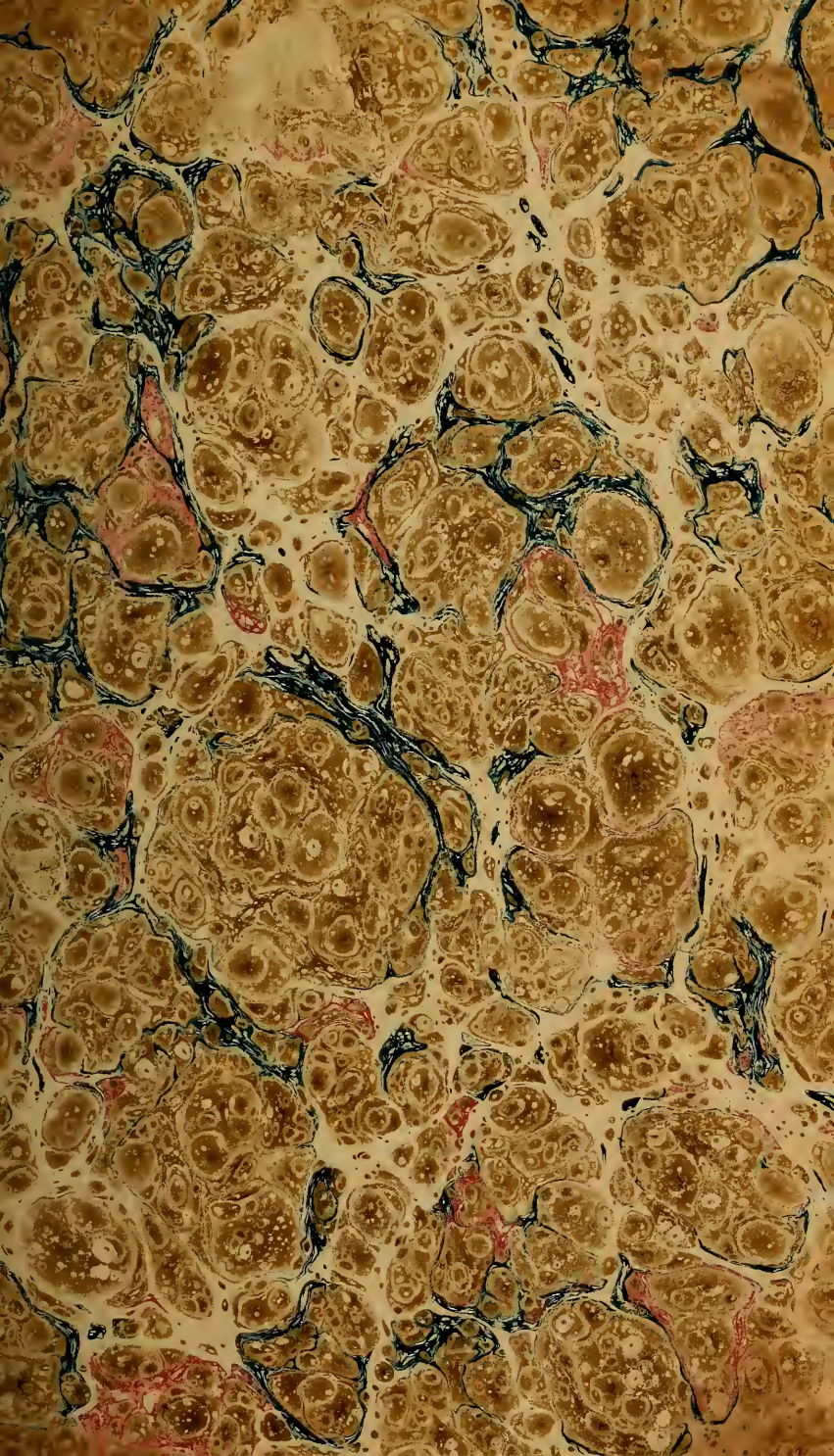
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OBSERVATIONS

ILLUSTRATIVE OF THE

NATURE AND TREATMENT

OF THE

PREVAILING DISORDERS

OF THE

STOMACH AND LIVER.

BY

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“ He wanted no other recommendation for any one article of science, than the recommendation of evidence—and, with this recommendation, he opened to it the chamber of his mind, though authority scowled upon it, and taste was disgusted by it, and fashion was ashamed of it.”

Dr. CHALMERS' 2nd Discourse—On the Merits of Newton's Philosophy.

London :

PRINTED FOR CALLOW & WILSON, MEDICAL BOOKSELLERS,
PRINCES STREET, SOHO.

1824.



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PREFACE.

THE liver is a gland of waste; the stomach and small intestines are organs of supply—(a supply of the most important and imperious nature): the former, is an insensible viscus, comparatively speaking, loosely connected with the other abdominal viscera, and with the general habit; the latter, are organs of elevated sensibility, not only intimately associated with every part of the system, but themselves forming the chief viscera of the abdomen, and with their blood-vessels, nerves, and membranes, making up the great bulk of this cavity. From this, I believe, we rightly infer, that the

liver is an organ in the animal economy of far inferior importance to the digestive tube; and I maintain, that its disorders are by no means to be compared with those of the extensive surface of this canal, either in frequency, or severity, or consequence to the welfare of the constitution. The principal object of the following observations is to enquire into the evidences of this fact, and to shew, that the organization, vital properties, functions, and sympathies, of this canal, when contrasted with those of the liver, tend to prove, that what are commonly called “*liver and bilious complaints*,” are, nine times out of ten, in reality affections of the stomach or bowels,—and, that combined with a consideration of the symptoms, and effects of remedies, the

above circumstances become irresistibly convincing of the truth of this assertion.

My attention was early excited towards ascertaining the correct pathology of those maladies, so generally named “*liver complaints*,” from a persuasion, that in the nature of things, disordered or diseased liver is not likely to be, in any degree, so often met with, or of such consequence, as disorders of the functions of the alimentary canal,—that centre of sympathies, to which we are incessantly and immediately applying stimulants and irritants, so numerous and dissimilar; and from finding, that when these evils were treated in the too common way, with active mercurials, they never failed to increase instead of disappearing, being not

seldom confirmed, so that the parts affected ever after remained debilitated, and subject to frequent disorder: whereas, a different treatment directed, in the first instance, towards restoring the impaired energies, and healthy secretions of the digestive tube, rarely failed to remove all complaint. It is not a little singular, that the sentiments of Mr. Abernethy, and Dr. Hamilton, in regard to the paramount frequency of disorders of the stomach and bowels, and the effectual relief to be obtained in them, from the exhibition of mild aperients and alteratives, should have gained such general confidence among medical men, when their practice is so seldom and imperfectly followed, especially that of the former writer; the liver still being harped upon continually,

as bearing the onus of disease, and calomel accordingly administered with an unsparing hand.

The light thrown upon the subject of the first part of this essay by morbid anatomy, has been drawn exclusively from the records of dissections contained in the writings of men of professional eminence, rather than from any cases and examinations of my own; because those records are before the public, and as the dissections they describe were not instituted to serve my purpose, they will with justice be received as more satisfactory and conclusive.

Though I consider that mercurial preparations are extensively exhibited, in

such doses, and for so great a length of time, as constitute them active poisons rather than remedies; yet, let it be remembered, that I do not here inveigh against their proper use, but only against their *abuse*. This is an evil of some magnitude in Great Britain; and it appears to me imperative upon the profession, to take a closer and more impartial view of the properties and operation of mercury, particularly of calomel, than has yet been witnessed; seeing, as we do, that scrophula, hydrecephalus, consumption, and indigestion, are fast increasing upon us. These are all diseases of debility, and the last, though not the most formidable, is perhaps now the most frequent. Whether the abuse of calomel has operated so extensively, as the great and visible increase

of luxurious living, in the production of disease generally, in this country, I am not prepared to say; but feel persuaded, that it has been the most fruitful of all sources of the astonishing frequency of stomach, and what are erroneously called “*liver complaints.*” In the treatment of these maladies, it has been too general to disregard altogether the important principle, that “the relief of irritation is the great object of medicine;” and it appears evident, that, in endeavouring to remove supposed disease of the liver, our violent and deleterious measures have greatly multiplied real disorder and weakness of the digestive canal.

T. J. G.

Croydon,
May, 1824.

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“ When we consider how universal a sympathy and control this * central organ exercises over every function of the body ; imbued with exquisite and diversified sensibilities,—subjected to the first and coarsest impressions of our various ingesta,—stretched occasionally to an enormous extent, by the unrestricted indulgence of appetite,—disturbed by the passions,—exhausted by volition, and debilitated by intense thinking ; in short, assailed by numerous foes from *without*, and harassed by various revolutions from *within*, can we feel surprised, that the aberrations of this viscus should give origin to the greater number of maladies with which we are afflicted, or that those medicinal applications should be effective that are directed for their cure, through the medium of its sympathies ? ”

Dr. Paris—Pharmacologia, Vol. 1.

* The Stomach.

ON
THE NATURE
OF
THOSE PREVAILING DISORDERS,
WHICH ARE ERRONEOUSLY CALLED
“ *LIVER COMPLAINTS.* ”

THERE appears to me to be two prominent errors in the medical practice of the present day: one, is the mistaking severe disorders of the stomach, and intestinal canal, for disease in the liver; the other, is the employment of large doses of mercury, for the cure of these supposed “ *liver complaints.* ” The mischief that arises from these errors is incalculable. They are wide-spreading evils, whose destructive

influence is unhappily felt by persons of every age, rank, and condition, and which call aloud for a remedy.

The term “*liver complaint*,” is now in the mouth of every one; and it is well known, that mercury in some form, generally the most injudicious, is the universal medicine for all kinds and degrees of disorder in the digestive organs. A patient suffering from such disorder, which is usually denoted by oppression at the stomach after eating, want of appetite, weakness, depression of spirits, irregularity of the bowels, discoloured motions, &c., can at this time hardly consult his physician or apothecary, without being told he has a “*liver complaint*,” and, as a necessary consequence, being soon loaded with calomel or blue pill. Indeed, it is a fact, of which I am convinced from ample experience, that even the slightest forms of derangement in the assimilating viscera,

are often designated by the above fashionable term, and treated accordingly.*

It is much to be regretted, that there is a fashion in medicine, as well as in the other affairs of life. A few years ago, the majority of ordinary complaints were said to be on the nerves: Now, they all depend upon, and centre in the liver. On this subject, an admired modern writer has well observed, “ The Princess, afterwards Queen Anne, was subject to Hypochondriacal attacks, which her physicians pronounced to be Spleen, Vapours, or Hyp, and recommended Rawleigh’s Confection, and Pearl Cordial, for its cure; this circumstance was sufficient to render the disease and remedy *fashionable*, and no other complaint was ever heard of in the precincts of the court but that of the Vapours.

* See the valuable little work of Dr. Hall on the Mimoses.

Some years afterwards, in consequence of Dr. Whytt's publication on 'Nervous Diseases,' a lady of fashion was pronounced to be nervous—the term became general, and the disease fashionable; and Spleen, Vapours, and Hyp, were consigned to oblivion. The reign of Nervous Diseases, however, did not long continue, for a popular work appeared on Biliary Concretions, and all the world became *bilious*.* It is an unhappy circumstance, that the world still continues in this state, and that both the disease, and its remedy, have taken so deep a root in the professional mind, that there is yet no appearance of a change to another ideal fashionable malady, whose favourite remedy we might hope, would be a medicine more like Pearl Cordial, or Rawleigh's Confection, than calomel, and therefore

* Paris's Pharmacologia, vol. 1.

more congenial to the human constitution, and which, if it were not attended with any sensible benefit, would possess, at least, the advantage of being innocuous.

Those disorders which are, in common language, called bilious and liver complaints, are denoted by some or all of the following symptoms, viz. a sense of distension and oppression after eating, with flatulent, acid eructations; diarrhœa, or constipation, and uneasiness of the bowels; furred tongue; impaired appetite and strength; discoloured motions, they being either green, black, or much too light; nausea, head-ache, and bilious vomiting; palpitation of the heart; pain in the pit of the stomach and towards the right side; sallowness of complexion; and depression of the spirits:—and if the chief, or the whole of these symptoms are present, especially if in a severe degree, it is usually considered sufficient

to justify the opinion, that a liver disease exists. But according to my experience, a very large majority of those maladies are not liver complaints, but properly disorders of the stomach, and intestinal canal ; and this fact will form the subject of consideration in the first part of this essay.

It is acknowledged, that in every severe disorder of the viscera, the liver participates, and its secretions are consequently vitiated ; but this is a secondary affection, and very different from the state in which that organ is usually considered to be found. They are not, as is erroneously imagined, primarily and chiefly liver diseases, in which there is, at least, incipient disorganization of that viscus, or a condition nearly approaching to it, which is the idea commonly intended to be conveyed to patients, and generally received by them, from the use of the term *liver com-*

plaint; but are functional derangements of the stomach and intestines, the liver being affected secondarily and sympathetically; and so far from requiring large and repeated doses of mercury, for the restoration of its healthy functions, that they can be permanently re-established only by the use of means directed to correct the original morbid affection. Among these means, we shall see that mercury is not always admissible, even in minute doses, and that in large ones it is invariably pernicious.

So vast a sink of disease has the liver been thought of late, that it is considered by some men, of no small professional eminence, as amongst the greatest improvements of modern medicine, that the attention of the practitioner is duly awakened to the “remarkable sympathy” which it exerts in its functions with all the other viscera! This sentiment appears to me

utterly inconsistent with our physiological knowledge, and with the light thrown on the pathology of abdominal disease by morbid anatomy : it seems invalidated by established facts. When we remember the dull sensibility of the liver, and the loose connexion it has with the other viscera of the abdomen, and with those of the chest, by reason of the small number of its nerves, we are at a loss to conceive how this “ remarkable sympathy” can exist between them ; and if our judgments are unbiassed by theory—unwarped by *bile*, surely we are naturally led to question it: but if it be transferred, as it ought to be, to the alimentary canal, we are so far from being unable to perceive the source of that intimate and important sympathy subsisting between this and every other organ, and indeed with the remotest parts of the body, that we are surprised it has so long escaped due attention. For whilst the ana-

tomist notes the paucity of nerves distributed to the hepatic viscus, he is struck with the number and variety of them, almost innumerable, which ramify and subdivide upon the alimentary canal and mesentery, especially upon the upper part of the former. These, by their connexions with each other, with the nerves of the spinal marrow throughout, and with those of the chest and head, establish such an intimate intercourse of sensations and affections between themselves, and every other part of the body, as readily explain the marked and powerful influence they exercise over the functions of every organ, even the most distant, and of both the external and internal surfaces. In these nervous connexions, and in the elevated sensibility arising from, and dependent upon them, we at once recognise the constitutional origin of local diseases, and the source of those wandering, sharp

pains, and indescribable sensations, as well as of that great nervous depression, and general disorder and debility, invariably accompanying an unhealthy state of these assimilating viscera. By reason of these extensive and diversified associations, the stomach and bowels become a centre of sympathies, and disorder originating here, rapidly propagates itself to every other part. Thus we see the propriety and necessity of attending closely to the state of these internal viscera, in diseases of every class and degree, whether original or sympathetic.

Though I do not consider the nerves as the exclusive instruments of sympathy, they are unquestionably the chief sources of it ; and therefore, it is a natural inquiry, where this “ remarkable sympathy ” appears from disordered liver, and where does it arise, situated as this viscus is, almost without the nervous connexions established

between the other assimilating viscera, and all other parts of the body, by the important system of the great sympathetics? These nerves are the principal links which unite the internal nutritive functions, to those which keep up the relation of the animal with external objects; and it is by this bond of union that the derangement of their important functions, whether by acute or chronic disease, is necessarily attended with proportionate changes in all the acts of the animal economy, in the same manner as the defects of one wheel interrupts or disturbs the mechanism of a whole machine. But, as was observed above, so loose is the nervous connexion of the liver with the alimentary canal, and consequently with other parts of the system, that though acute inflammation of any portion of this tube is invariably marked by the acutest suffering, and the most alarming symptoms, which, if not checked,

speedily terminate fatally, inflammation of the liver will be making destructive progress when the patient slightly complains only of a flux,—frequent inclination to stool,—gripings, and watery motions ; the heat of the surface being but little increased, and the pulse neither hard nor quick : and thus hepatitis *generally* appears, even under the burning sun of the east. Morgagni mentions several instances of inflammation of the liver, marked by no peculiar symptoms, an occurrence with which our naval and military surgeons, who have served long in tropical climates, are very familiar.* In the ordinary chronic affec-

* Dr. Archibald Robertson, in his Medical Topography of New Orleans, in describing the frightful march of dysentery, which “ knew neither pause nor hindrance, but, like the fabled vulture of ancient mythology, pursued its cruel task from day to day” amongst the British troops before that place, observes:—“ Oftener the complaint would make its attack with the

tions, also, of this viscus, occurring in this country, so great is its insensibility, so

common introductory symptoms, and *no pain in the right hypochondrium was felt throughout the disease, either on inspiration, or strong pressure under the false ribs.* In whatever garb of disguise it made its appearance, disease of the liver, (as I have before stated,) and consequently, a vitiated state of its secretions, were undoubtedly the primary cause of the mischief. Dissection of the fatal cases shewed structural derangement,—a soft friable condition, and generally suppuration of that gland. I have often found two separate abscesses in the parenchyma of its large lobe, the one generally less deep-seated than the other, and containing, in some instances, a quart of pus, similar in colour and consistence to what is usually found in psoas abscesses. *How such extensive disorganization and formation of matter could take place without any preceding palpable indication of local mischief, is to me still a mystery: But such was the fact.* In noticing the appearances on opening the abdomen of a naval officer, who fell a martyr to dysentery off New Orleans, he says,—“After the liver had been removed, and laid out for minute inspection, I found an abscess of such extent, and so lined in its inner surface with a thick, fretted, and irregular exudation of coagulable lymph, that it resembled a familiar

indistinctly do the other viscera of the abdomen, and the general system sympa-

and homely object, viz. a large winter glove, lined with worsted ! On accurate examination, a second abscess was found, lower down in the large lobe, containing a pint of pus."

" *This officer had never, at any period of the disease, felt any pain in his side : From his general intelligence, and from the accurate descriptions he gave me daily of his minutest sensations, I am convinced he would have mentioned that pain, had it existed, even to the extent of a 'sensus molestiæ.'* Besides, he was one of the last men in the world that one would have suspected of hepatic affection, being florid in complexion, and having previously enjoyed the best health all his life."

" Instructed by this insidious case, I had my eye to the liver ever afterwards ; *but pain of side, or pain on pressure under the ribs, was by no means often felt, though dissection after death brought to light hepatic disorganization, equally extensive as in the above case.*"

—Dr. Johnson on Tropical Climates, page 438.

Though I cannot agree with Dr. Robertson, that this hepatic disease should be considered as the chief and primary cause of dysentery, it being regarded by me as one only, and not the principle, in a series of morbid causes ; yet these extracts tend irresistibly to convince

thize with it, that extensive organic mischief has often been detected in it by the knife of the anatomist after death, when the patient during life was unconscious of any thing wrong in that region. These persons, when alive, had shewn no yellowness or sallowness of complexion, had complained of no pain in the right side, or shoulder, nor suffered under any perceptible weakness, or any other symptom which could lead their friends or physician to suppose, that so large a viscus was actually in a state of irremediable disease. Are not these facts irreconcilable with the hypothesis, of an important and remarkable sympathy existing between hepatic derangements, and all the other acts of the animal economy? Do they not, on

us of the truth of what I here advance, and which it is material for the profession and the public to reflect upon,—the natural and conspicuous insensibility of the liver, and the inferior importance of its functions.

the contrary, forcibly convince us how comparatively imperfect the relation of the liver is, how indistinct its sympathy, with other parts; proving most satisfactorily the error and folly of calling the prevailing disorders of the digestive organs, *bilious* complaints? And when we reflect upon the extensive nervous influence, and the exalted sensibilities of the stomach and bowels, do not the probability and rationality of considering these affections as centering here, and not in the liver, become apparent?

The fact of positive disease frequently taking possession of the liver, without the constitution, or any single viscus sympathizing with it, and therefore, without its being discovered during the life of the patient, cannot be denied. In order to overcome the powerful argument thence derived, against the supposition of so “remarkable a sympathy” being exerted by

this viscus, in its functions with all the remaining viscera, will it be asserted, that it is not the organic injury, but the simple derangement of function in the liver, that is attended by effects so extensive and pernicious? This follows of course: But it is, at least, unreasonable, and contrary to what takes place in any other organ; having for its support, merely the discoloured appearance of the alvine discharges, and the power of mercury in restoring them to their natural colour, which we shall presently see is a weak prop. Those who maintain this opinion, have the cause of an improbable analogy to explain, for we meet with nothing similar in the lungs, the head, the digestive tube, or elsewhere. Here the favourable prognosis of the physician, is in proportion to the freedom of the affected viscus from structural disease, and the degree in which the remaining viscera sympathize with it, and in which the

general habit emaciates and sinks, is also generally in the same proportion. This accords with all we know respecting the laws of organic life ; and before it can be admitted, that these laws are reversed in favour of hepatic derangements, we must assuredly possess some clearer and better reasons for it than have hitherto been attempted.

The stomach, and first intestines, unquestionably perform the most important offices in the frame, and are the grand sympathizers with all the local and constitutional derangements of the system, the cause of which has been pointed out as arising from the enlarged and varied communications of that nervous apparatus, known by the name of the great sympathetics. These assimilating viscera carry with them in their action all the other organs of the economy ; “ they summon to their aid the whole system of the vital

powers ; and this sort of derivation is the more conspicuous as the organization is more delicate, the sensibility more lively, the susceptibility greater." Yet, in the modern fashionable system of the pathology and treatment of abdominal disease, these are considered parts of far inferior consequence to the liver ; this is regarded as the fruitful "*fons malorum*," and thus we retrograde in our knowledge of diseases, and in our acquaintance with the means of cure.

In man, the intestinal tube is at least six times the length of the body : so delicate is its organization, so important its actions, that, as we have seen, it possesses a distinct system of nerves, remarkable for their acute sensibility, and for the fineness, as well as the number, and the connexions of their filaments. There is an immediate sympathy between it and the centre of all nervous influence, the brain,

for there is an union in the stomach of the cerebral and sympathetic nerves: in it, the food we take is converted into a homogenous nutritive fluid, which now nearly resembles, and is soon actually to become, blood, the substance that gives life and energy to every part. This canal is the distinguishing characteristic that separates the animal from the vegetable creation, and is therefore essential to every animal, from the zoophyte, eternally fixed in his rocky habitation, up to man, whose restless activity carries him to the very ends of the earth. It is the part to which the properties of life seem to adhere with the greatest tenacity, for whatever is the kind of death the animal dies, this is the last organ in which the traces of life may be discovered. Moreover, it is the most irritable part of the human body; and such are its connexions and sympathies, that the morbid phenomena resulting from

irritation of its internal membrane, are infinitely more numerous and distressing than all the rest of the catalogue of human diseases collectively. It may be safely asserted, that seven-eighths of human afflictions originate in this cause. No bounds can be placed to the various maladies it simulates, and to which it gives rise. At one time it will produce all the phenomena of typhus fever, of the most malignant grade, and the patient will be as completely delirious as in phrenitis itself: at another, the interruption to digestion, conjoined with the sympathetic disorder of various other functions of the system, resulting from simple irritation of this extended surface, will terminate in actual dissolution, no traces of disease being discoverable in it, or in any other part after death. Then, surely, the man who can compare the importance of the hepatic functions with those of this tube,—who

can regard the disorders of the former as those which should engage our chief attention in abdominal derangements, and in the diversified, local, and general maladies to which the human body is subject, takes a lengthened stride backwards in physiological and pathological science, which every benevolent mind must regret, on account of its consequences, and in which no one will follow him who attains to correct views, and to a successful practice in medicine.

There are several circumstances which have concurred to render hepatic disorders and diseases, and their remedy, calomel, fashionable in Great Britain. The five following have probably had the greatest weight, and we shall, therefore, confine our attention principally to them.

They are,—1st. A fulness, and tenderness on pressure, and pain, being often present at the pit of the stomach, extending a little to the right side.

2d. The alvine discharges being almost always discoloured in bowel complaints, and not unfrequently green or black, like pitch, from which they have been called *bilious*; and the power of small doses of mercury, in correcting this appearance.

3d. Organic disease being sometimes found in the liver after death, in cases of intestinal, and other disorders, when no traces of such mischief are detected in any other viscus.

4th. A great number of our countrymen annually return from the East and West Indies with biliary and intestinal disorders, arising from their residence within the tropics, where the liver is the organ the most obnoxious to disease, and where calomel is the sovereign remedy for all bodily ills: these, on their return to England, are ready to pronounce the maladies of their friends to be liver complaints, and cannot, of course, conceive any other medicine equal to calomel.

5th. The sensible influence which the opinions and practice of professional men from India, have had and still continue to have, over medical practice at home.

1st. The fulness and tenderness here referred to, must not be confounded with the enlarged and indurated state of the liver, occasionally to be felt by manual examination. This is generally too sure an indication of organic injury in that viscus, while the former, for the most part, affords us no grounds for such a suspicion.*

* Mr. Abernethy, (at page 88 of his *Observations on the Constitutional Treatment of local Diseases*) has related the case of a young lady, in whose hepatic region an incipient enlargement and hardness of this kind was felt externally. While reading it, I could not help contrasting the gentle means this gentleman used with perfect success for the cure of this affection, consisting of "mild mercurials and aperients," with the active stimulant measures too commonly resorted to in similar instances, where calomel in large and oft-repeated doses is forced upon the unhappy patient. He says, "I found,

This fulness and soreness at the pit of the stomach, and in the right side, I believe usually to depend upon irritation and debility of the internal surface of the stomach, duodenum, or colon; and I think that the situation, and acute sensibility of these parts,—the frequently rapid development of the symptoms,—the character of the swelling,—the effects of remedies,—

upon inquiry, that the chief seat of her pains were in the posterior edge of the liver. Indeed, that viscus was enlarged, so as to be felt in the epigastric region, and was so tender as to cause much pain on being compressed, at any part along the cartilages of the ribs. Her tongue was furred; her appetite deficient; digestion bad; bowels costive; and stools black, or else untinged with bile. I had no hesitation in advising that attention should be chiefly directed to rectify the disorder of the chylopoietic viscera. *Mild mercurials and aperients* were given, by which, with other means, she got materially better in health, and was able to walk about as well as ever. The gentleman who attended this patient, met me accidentally two months afterwards, and informed me that she was quite well."

the insensibility of the liver, and the appearances, on dissection, of fatal cases, sufficiently prove the correctness of this idea.

At first view, it is evident that we must often be liable to mistake the nature and seat of the swelling and pain we are considering, if great attention is not paid to the case, since the stomach and duodenum, as well as the colon, are situated in the immediate region of the affection, close upon the biliary organs. The ensiform cartilage, or what in common language is called the end of the breast-bone, will be found to present commonly to the middle of the stomach, and the lower orifice of this organ, when in its natural state, is opposite to the fossa umbilicalis of the liver:—The duodenum, or first intestine, on quitting the stomach, goes in a direction downward; then it passes upward till it touches the gall-bladder; then

making a sudden turn, it descends directly near to the right kidney, and is involved in the lamina of the mesocolon ; it then takes a sweep towards the right side, obliquely across the spine :—The colon ascends on the right side of the small intestines, before the kidney ; passes across the upper part of the belly, under the margin of the liver, (in contact with the gall-bladder), and before or under the stomach. Such being the situation of these viscera, and of the liver, we cannot be surprised if their derangements are often confounded, and that swelling and tenderness, existing either in the stomach, or duodenum, or colon, should, for want of strict examination, and from the superior attention paid of late to the liver, be ascribed to disorder or disease of this part.

Tenderness and swelling on the upper and fore part of the abdomen, is frequent in disorders of the digestive tube, but they

are in general different from those arising from enlarged liver, both in seat and character ; the fulness not being situated so much towards the right, or so low as the latter, and being not a hard, but a puffy, elastic swelling. The tenderness also differs in its seat, from that produced by hepatic affection, in the same way as the enlargement, and it is not, like the latter, felt only on pressure of the hand, but is almost always present, more or less, until removed by the application of remedies, and is sometimes very troublesome when no pressure whatever exists on the part. The fulness consequent upon chronic hepatitis is very generally quite on the right side, and felt lower than the epigastric region ; but when it arises from irritation of the mucous membrane of the stomach, it is found mostly at the very end of the breast-bone:—when it is the consequence of a similar state of the duodenum a little

to the right, and a little lower than the termination of this bone. When it is still lower, and seemingly across the upper part of the belly, the colon is generally its seat.

These symptoms often supervene in two or three weeks, or even a shorter time after the patient is first conscious of indigestion, which is extremely unfavourable to the supposition of existing liver disease, as organic derangement takes a much longer time to develop itself in chronic disorders. From the acute sensibility of the alimentary canal, we are not at a loss to account for the rapid developement of these phenomena, while the faint sensibility of the liver becomes an additional reason for our considering pain and swelling, in its texture, to be rare when compared with a similar condition of the digestive tube. The different effects which follow local blood-letting in the two com-

plaints, likewise point out a real difference in their nature. In this puffiness, which I consider symptomatic of disorder in the alimentary canal, the application of leeches is indicated, and is almost immediately followed by striking, permanent benefit: in chronic disease of the liver, the local abstraction of blood is rarely indicated, and when resorted to, is attended with very little and transitory relief. Besides these well-marked distinctions between the two maladies, it will be found, if I mistake not, that the pain changes its place a little, and the patient gains some relief, on the expulsion of wind, in this affection of the stomach or bowels, which change and relief do not occur in diseased liver.*

The duodenum, or first intestine, is fixed by a rather loose cellular tissue to the

* Ferriar's Medical Histories, Vol. 2, page 28.

posterior side of the abdomen, and dissection has proved, that it is susceptible of such dilatation, as occasionally to equal even the stomach in size. The existence of pain in this part may frequently be detected by its being felt under the seventh or eighth rib, passing deep, seeming to be in the seat of the gall-bladder, and stretching towards the right hypochondrium, and to the kidney, and again appearing as if on the loins. From the course of the duodenum, we should expect pain in it to take this direction, and we readily perceive how liable it is, in our day, to be confounded with that arising from hepatic affection. Dr. James Hamilton, Jun. remarks, that when along with the usual symptoms, there is a milky white appearance of the urine, as if it were mixed with chalk, he never has any doubt on the subject of its being a disorder of the first intestine, because he has invariably found the duo-

denum affected under such circumstances, and he never observed the same appearance of the urine in diseased liver.* I am sorry that I have not been able to ascertain what importance is to be attached to this symptom. If future observation should prove it to be generally present in the disorders of the first intestine, while it is as often absent in cases of disorganized liver, of course it will materially assist us in forming a correct diagnosis in these diseases. It is nearly certain, that in disease of the biliary organs, the urine seldom fails constantly to deposit a pink sediment, which kind of deposition very rarely appears, for any length of time, in disorder of the digestive canal.

The duodenum is more glandular, and more vascular than any other part of the small intestines; it is the part which

* Observations on the use and abuse of mercury, page 110.

receives the biliary and pancreatic fluids, where the peristaltic motion is begun in the natural action of the bowels, and in which a kind of second stage of digestion takes place; and it is to be regretted that its disorders do not gain greater attention among us, as it is more than probable that they constitute some of the most painful and severe within the abdomen, and form no mean proportion of those maladies commonly treated as *liver complaints*. Hoffman, Sylvius, and a few others, have treated of them in their works, in an instructive way; indeed, Mr. John Bell observes, that it has been the opinion of the most respectable old physicians, those whose knowledge of diseases has been drawn from an acquaintance with anatomy, from the frequent inspection of dead bodies, and the observation of the symptoms during life, that the study of the diseases connected with the duodenum, is the most

important which can occupy the attention of the medical inquirer.*

The intestine colon seems especially liable to excessive irritation and disease, and that tenderness and swelling in the right side, is often owing to such a condition of this part, I am persuaded from observation, and the fact is corroborated by the testimony of respectable writers. In the records of dissections of protracted and fatal cases of abdominal affection, to be found in different medical works, the colon is noted as having presented, in the majority of instances, particular marks of organic lesion. This is observable in the writings of Mr. Abernethy, M. Louis, M. Broussais, and Dr. Blackall. Out of fifty-three cases of disease in the alimentary canal examined by M. Andral, Junior, twenty-eight presented remarkable disor-

* Bell's Anatomy, Vol. 4, page 70. (1804).

ganization only in the cæcum and colon, and the greater part of the remaining number shewed an analogous state of the lower portion of the ileum, immediately joining the colon. In five, out of six fatal cases of abdominal disease, alluded to by Mr. Howship, the disorganization was almost confined to this part of the canal.

The following case, for which I am obliged to Mr. Howship, strikingly exemplifies the mistakes sometimes made in practice, in considering an affection of this bowel as disease of the liver; and it is hoped that it will prove an useful illustration of the correctness of the opinions above delivered on this point.

“ The subject of this case was a lady, whose complaints had, by various practitioners, been attributed to disease in the liver; upon which presumption she had, in the early part of her illness, been repeatedly subjected to the influence of

mercury, without benefit. Of several who had seen and attended her, Dr. Hooper was the only physician who could never be persuaded to believe her complaints hepatic, notwithstanding constant local uneasiness, frequently severe pain, and a degree of tumour below the cartilages of the ribs on the right side, with occasional pain at the shoulders. The action of the bowels was irregular; sometimes there were twenty-four stools in as many hours; at others, strong purgatives were required to be frequently given for days together, without effect."

A variety of medicines were given, but in vain, and she died in February, 1820.

"On examination, in presence of Dr. Hooper, I found a thickened, discoloured, soft and elastic tumour lying across the upper part of the abdomen, a circumscribed portion of which tumour had visibly raised the external parietes, previous to

their being laid aside. From the right extremity of this tumour, several strong adhesions passed off to the adjacent surface of the parietes; from its anterior part also, several short thick cords, the result of effusion, were firmly attached to the peritoneum, just within the scrobiculus cordis. *The tumour itself turned out to be the stomach, and transverse arch of the colon, closely and completely adherent to each other; the former viscus much discoloured, the latter much diseased, so altered in texture, and so much thickened, as to have entirely lost its natural characters.*"

"The adhesions just mentioned were exceedingly strong, and all proceeded from the colon, which had evidently been the seat of the primary inflammation. The bands attached to the scrobiculus cordis clearly explained the distressing sense of gnawing, or burning, or glowing heat,

with the occasional sense of pulling, or drawing at that part, from which she was never altogether free."

At the latter period of her illness, the patient had dropsy, and Mr. Howship adds, "The ascites proved to have been merely the consequence of the derangement in the function of absorption, resulting from the first inflammation; *for the liver was healthy in structure*, although its peritoneal covering was somewhat thickened."*

Hard drinkers are thought to be particularly obnoxious to disease of the liver, which is unquestionably true; but now that the diseases of the intestine colon are considered, I ought not to pass over unnoticed the fact, that in many such instances, the hepatic viscus has been

* Howship on Diseases of the Lower Intestines, page 80.—(3d edition).

found, after death, quite healthy in its structure, while the only or chief disease has been in the colon. Mr. Howship, at pages 123, and 125, of the work just referred to, has noticed two cases of this description, and Dr. Blackall, in his work on dropsy, mentions others. Mr. Howship's first case, (page 103), was that of a gentleman, who, after many years of hard drinking, died from a blood-vessel in the lungs bursting into the cavity of the chest; "the liver, stomach, and bowels, were apparently healthy, except the head of the colon which felt thickened. I therefore dissected this part out, secured its vessels, and the same evening injected it. In this operation, scarcely any resistance was felt from the arteries; and on cutting open the bowel, I found this was owing to a broad band of ulceration by which the villous membrane surrounding the head of the colon and cavity of the cœcum

was destroyed, the vessels upon the ulcerated surface allowing the injection to flow freely into the gut."

With regard to positive pain at the pit of the stomach, and in the sides, I think it is so common, that few cases of derangements of the digestive organs occur without some degree of it, and therefore it is not an indication of disease, or disorder in the liver. Dr. Marshall Hall is of the same opinion. "Sometimes," he observes, page 75, "there is extreme pain extending across the false ribs, leading to the suspicion of inflammation of the pleura, or, together with the affection of the complexion, it leads to the suspicion of inflammation or disease of the liver."—"It is distinguished by being liable to recede and to recur, by varying its situation, frequently by being unattended by tenderness on pressure, when the examination is made with proper care."—This author

is fully sensible how often pain in the sides leads to a supposition of a "*liver complaint*": in referring to the means of distinguishing those affections of the digestive organs, which are attended by a sallowness of complexion, and occasional pain in the side, and which are therefore often confounded in practice with disease of the liver, he remarks: "By these means, the list of chronic diseases of the liver would be considerably curtailed, for I could recall, at this moment, numerous instances of this error in diagnosis."*

I have known several patients, in whom, together with the usual dyspeptic feelings, there was swelling and frequent darting pains in the epigastric region, and sides, who have been under the common course of treatment for a "*liver complaint*" for

* Essay on the Mimoses, (2d edition), page 144.
See also the Cases at page 76 of the same work.

several weeks, or months, without deriving benefit, but rather growing worse; and who have had this pain almost directly removed, the enlargement also gradually disappearing, under the use of means directed to restore the digestive tube to a healthy state. In some cases of this description, there has existed so great a degree of tumefaction, and occasional pain, in the side, as would have led me at first view, if I were not aware how fallacious these symptoms are, to pronounce them as certain indications of disease in the liver. When, however, the other appearances denoting disorganization were absent, it has been my practice to reject such an opinion, and the effects of remedies have invariably proved its propriety.

The late Dr. James Curry, (*de mortuis nil nisi verum*), whose book on biliary concretions, together with his mode of practice, operated greatly in making

diseased liver, and its supposed remedy, calomel, so very fashionable and fatal, was so wedded to his notions on this subject, that in his patients, invariably, the liver was considered the real source of all their ailments; and if they complained of pain in the left side, in the region of the stomach, he would endeavour to persuade them they were mistaken, and that it certainly was in the right! If he could not bring them over to this belief, it was his custom to say—Ah, I shall bring it there then! What value can be attached to the opinions, or what good could attend the practice of a man whose judgment was so amazingly perverted? That this unfortunate physician did often bring the pain to the right side there is no question, for he took a sure and speedy method of doing it, by administering his *panacea*, (calomel), in large, oft-repeated doses, which, by excessively stimulating, and

debilitating the secreting vessels of the liver, and of all the other digestive organs, provoked disorder, and paved the way for a rapid supervention of disease. It is well known, that Dr. Curry was in the habit of salivating people twice and even thrice during a single attendance, and it is an incontrovertible fact, that the patients he has left behind with broken, ruined, health, “the remnant of their former selves,” from the excessive use of calomel, are very numerous. The professional man who allows his judgment to be so far perverted by a favourite hypothesis, or notion, as to lead him, without scruple or care, to institute measures that are inimical and poisonous to the constitutions of his patients, may be truly called unfortunate, and his errors ought to be pointed out, that the public may be sensible of the danger of such means, and the juniors of the profession also put upon their guard.

2d. When the stomach and other digestive organs are weakened, it is certain that they are often unable to exert that power over the matters they contain, which in a state of perfect health prevents their acting chemically on each other, and occasioning decompositions and forming new combinations. This power which the healthy stomach exercises over its contents, was appropriately called by Dr. Fordyce, its *governing power*. Under disorder, when this governing power is lost, or impaired, an acid is generated in the stomach and bowels, which decomposes the bile and produces a green precipitate, and green stools are the consequence; in other instances, the acid combines with the soda of the bile, and there is a thick, viscid, bitter precipitate, and the stools look like pitch. In some diseases, a green bile is brought up by vomiting. It is common to call such discharges as these

bilious, and to refer their unnatural appearance to a morbid action in the liver; but the fact is, that the bile itself, in such cases, undergoes a chemical change in the stomach and intestines, in consequence of the energies of these organs being impaired by disorder, and the idea of these discoloured evacuations being owing to an unhealthy secretion of bile, receives therefore little countenance from their existence. In some instances they appear to depend purely upon this decomposition of healthy bile; in others, upon that change united with diseased secretions from the alimentary canal itself: this last state is the most common, and is almost always present when the stools are very copious and fetid. That bile does undergo this decomposition is proved by some circumstances which are observed to take place out of the body. It is known, for instance, that the fæces of infants, al-

though yellow when voided, frequently become green after some time; and the urine of a jaundiced patient, which was of a deep yellow when voided, becomes after a few hours green. It is not easy to account for this change of colour, but by supposing that an acid is generated by the re-action of the elements of which the bile consists. Besides, we are aware that the intestinal juice, in a healthy state, has a brackish taste, and turns turn-sol paper of a deep red, shewing that it possesses acid properties; it is more than probable then, that under disorder, this acidity is much increased; and that it should, in that condition, from its operation on the biliary and pancreatic fluids, give rise to green or black, viscid discharges, is no more than we might anticipate.

That the black, pitchy, or yeasty, and fetid nature of the motions, are owing much more to an unhealthy condition of

the mucous membrane of the bowels, than to a wrong action of the liver, is rendered more than probable by the large quantity of these matters often voided under disorder,—by the mucous and bloody fluids with which they are frequently mixed, evidently vitiated secretions from the intestines,—and by the organic lesions and marks of inflammation, not seldom found in the large or small intestines in these cases, after death, when the liver shews no appearances of disease, or excessive disorder.

It is not likely, that the immense quantity of discoloured, offensive matter, sometimes discharged under severe disorder of the assimilative viscera, is poured forth entirely or chiefly from the liver, because its secerning vessels bear no proportion in point of number, activity, or importance to those opening upon the vast line of bowel contained in the abdomen.

Patients sometimes void, in the course of twenty-four hours, many quarts, and some even gallons, of various coloured liquids. Morgagni has cited the example of a woman, who, in one day only, passed, per anum, forty pints of a limpid fluid. Does it consist with our knowledge of physiology, to suppose that this is derived principally from any other part than the mucous coat of the bowels, which only, from being of great extent, seems fully adequate to such prodigious evacuations? The injudicious use of calomel, and excess or imprudence in eating and drinking, are the grand causes of the prevalence of indigestion and bilious complaints; these are stimulating agents, acting directly on the mucous coat of the alimentary canal; they irritate and disorder it, the first effect of which is to occasion a greater flow of blood into it; and its natural secretions become, in consequence, often increased,

and almost invariably faulty. Sometimes diarrhœa follows, and proves a salutary crisis to the existing irritation. The quantity of liquid exhaled by this coat under such circumstances, is occasionally astonishing.*

The slimy mucus, frequently found mixed with the fæces of persons labouring under aggravated disorder of the digestive organs, is certainly indicative of a highly disordered state of the functions of the bowels. The quantity of this, is sometimes excessive, and now and then appears like a purulent secretion. In adults, it is generally considered an indication of long standing disorder in the bowels.† It would

* It is probable, that the quantity of healthy *intestinal juice*, formed in twenty-four hours, amounts to eight pints. This was Baron Haller's calculation from experiment. We know, how very small a proportion, the quantity of bile, secreted in the same time, bears to this.

† Scudamore on Gout, &c. 4th edition.

appear, that there are not many cases of severe *bilious* disorder, where this slime is not remarkable, and we are assured it cannot come from the liver. It is particularly frequent in children, whose greater susceptibility and irritability, render them very subject to bowel complaints; at which we cannot be surprised, when we recollect the close connexion subsisting between the alimentary tube, and every other part of the body, by its nerves and blood-vessels. In this association, we perceive the reason why painful dentition, indigestible food, or cold followed by fever, invariably produces disordered bowels, and unnatural stools. Indeed, let irritation of the nervous system be excited, from whatever cause, it is commonly followed by derangement of the digestive tube; its secretions become vitiated, and either deficient, or in excess. - Whether the irritating cause be at the beginning local, as

from an injury, or general, as from fever, it is soon propagated, by means of nervous communication, to the highly sensitive system of the great sympathetics; and the healthy actions of the parts they supply, are, in consequence, immediately disturbed: but how the liver, an organ of faint sensibility, and rather loosely connected by the nervous system to the other chylopoietic viscera, and to the general habit, can be so pre-eminently affected, and its secretions so much deranged, as seems generally imagined, I am at a loss to conceive. If it does occur, which I altogether deny, the cause of it does not to me appear,—the sources of it are by me inexplicable.

Vague observation has considered the black, bloody stools, as morbid discharges from the liver; but an attentive consideration of the phenomena, and of the attending circumstances, inclines one to

look upon them as diseased secretions from the internal surface of the digestive canal ; and this opinion gains confirmation from the appearances presented on dissection. Bloody motions, says Dr. Marshall Hall, are “ affections of much more frequent occurrence, than is generally imagined, in abdominal derangements.” He speaks of vomiting blood, as being not unfrequently combined with it ; and adds, “ the two diseases appear to be similar affections of different parts of the *alimentary canal*.” “ In several cases, the patient has awoke in the morning with blood in the mouth.” * This last symptom, which must have occurred to every medical man of much practice, in cases of deranged general health, does in no small degree strengthen the conviction, that such black evacuations are derived from the bowels, and not

* Essay on the Mimoses, 2d edition, page 74.

from the liver. When the digestive tube is much deranged, the irritation extends throughout, from the mouth even to the anus;—the mouth is parched and hot, and the tongue coated with an unnatural secretion; at the other extremity of the canal, there is heat, uneasiness, and piles: both, though situated at so great a distance from each other, are consequences of the same cause. In like manner, irritation of the internal membrane of the intestines and stomach, accompanied with evacuations of blood, is carried by continuity of surface to the same membrane, lining the mouth; and the bloody state of this visible part of the organ, becomes a pretty sure criterion in what way the internal parts also are affected. We cannot be surprised, if a similarity of action pervades the whole surface, and a hæmorrhagic tendency appears throughout. “If pains of the abdomen are observed, if the

skin is burning hot, the pulse frequent; *if the digestions are slimy, membraniform, or bloody*, we may be satisfied that the intestine is the seat of more or less intense inflammation." Sometimes, however, "sanguineous evacuations have been observed to take place *per anum* in individuals, whose intestinal mucous coat was found sound after death. These passive hæmorrhages are analogous to those which take place in many dropsical individuals, at the internal surface of the serous membranes of the chest and abdomen; they are similar to the hæmorrhages, of which the skin, the cellular tissue, and the synovial membranes, become the seat in scorbutics."* "It seems probable, that the stools, which resemble pitch, are principally composed of *diseased secretions*

* M. Andral, Jun. on the Pathological Anatomy of the Digestive Tube.

*from the internal surface of the intestines, since they do not seem like the residue of the food, or discharges from the liver.” **

Mr. Abernethy, in referring to cases in which there were discharges downwards of black blood, together with other morbid matter, says, “ I examined the bodies of several persons who died under attacks of this nature, and found the villous coat of the alimentary canal highly inflamed, swollen, and pulpy. *Bloody specks were observed in various parts;* and sphacelation had actually taken place in one instance. The liver was healthy in *some* cases, and diseased in others.”† Again he writes, (page 47), “ where the disordered state of the bowels had been of longer duration, I have found the villous coat of the intes-

* Observations on the Constitutional Treatment of Local Diseases.

† Ibid.

tines swollen, pulpy, tinged with blood, and apparently inflamed, and sometimes ulcerated; and these appearances have been most manifest in the large intestines.”

In the Medical Repository for 1823, there is a case of diseased peritoneum and intestines, where the stools, in the beginning of the complaint, resembled ink, and towards its termination were of a light colour, purulent, and very offensive. As it shows the connexion which black, fetid stools, have with intestinal irritation and disease, I have inserted an abstract of it here:—“ Michael Slater, ætat. 31, was admitted into St. Giles’ Parochial Infirmary, October 22, 1822, having a tumour of considerable magnitude situated on the right side of the abdomen, attended with frequent pain and vomiting, extreme emaciation, and hectic symptoms. He stated that he had been ill five months; that his symptoms were occasional pain about the

navel, which he considered of a colicky nature; vomiting, and *dark-coloured evacuations, the latter of which he described as resembling ink*; and that about a month after these symptoms had come on, he discovered a small tumour on the right side of the abdomen, which, with his other symptoms, had continued gradually to increase.”—“ He died December 13th.—About three weeks previous to his death, a distressing diarrhœa came on; his evacuations, which had hitherto been scanty, and not procured without the aid of medicine, now became copious, of a light colour, purulent, and very offensive.”—“ Dissection.—The peritoneum lining the abdominal muscles was found remarkably thickened (the thickening varying from one and a half to two inches) by a substance somewhat resembling fat, but much more firm. On exposing the intestines, an appearance presented itself, which at

first seemed difficult to unravel: on more minute examination, however, it was evident that the tumour was formed by the same thickening or organized deposition already described, and which extended more or less over the whole surface of the peritoneum. *The parts more immediately forming the tumour, were the lower portion of the ileum and ascending colon,* which, having become agglutinated by coagulated lymph, formed an immense and compact mass. On the anterior part of this tumour, was an opening formed by ulceration, through which a large quantity of matter had escaped into the cavity of the abdomen, which, in all probability, was the immediate cause of death. On following the course of the outer opening, a cavity was laid open, occupying its central part, and extending about eight inches from side to side, through which all excremental matter must have passed

for some time previous to death, the structure of the intestines being at this part totally destroyed by ulceration; consequently, there were four openings communicating with the cavity, formed by the ascending colon on one side, and the inferior part of the ileum on the other. *The intestines, through the greater part of their course, were considerably constricted.* The ureter and pelvis of the right kidney were greatly distended with urine. The lungs were free from tubercles, and appeared perfectly healthy. The remaining viscera were natural."

The black vomit, so often present in fatal cases of the yellow fever of tropical climates, was formerly thought to be a morbid secretion from the liver, and the black stools common in that disease were also considered *bilious*; indeed, many of the incorrigible sticklers for *liver complaints*, may still regard them as such: but

close observation, and repeated dissection, have clearly demonstrated the former to be a diseased secretion from the stomach, and the latter vitiated discharges from the bowels. They are unquestionably of similar character to the melæna, and hematemesis, of temperate climes, differing from them only in intensity. In the severer examples of this frightful fever, “ the vomited matter is *rarely bilious*; it is a pituitous or ropy liquor, with numerous darker coloured flakes: sometimes clots of blood entangled in mucus, apparently portions of the inner coat of the stomach, are brought up in gulpings;—if the body be open, the *stools are black, smooth like tar or molasses*, and offensive;—blood, sometimes, without mixture, discharges itself gradually by the anus, sometimes *mixed with connected portions of mucus—the inner coat of the alimentary canal—it passes off at intervals in large evacua-*

tions." In the aggravated form of this malady, " hæmorrhage from the nose, oozings of blood from the ears, gums, and in short, from the whole track of the alimentary canal, *from the mouth downwards*, are observed on many occasions." On examining the bodies of those who die of yellow fever, " the blood vessels of the stomach and intestines are found much distended, but actual inflammation is rarely apparent; the appearance of the inner surface is seldom uniform through the whole,—the veins are generally distended; but besides this, the inner surface of the stomach often exhibits large spots, or circles of a bright red, resembling actual inflammation; in the centre of which, are frequently seen small points, like beginning gangrene; the villous coat is also loose, in the act of separation, and actually separated in some places. In the second form of this fever, more frequently

than in the other, the colour of the inner coat of the intestinal canal is like brick-dust, the coat hanging loose, and almost separated. Sometimes this takes place uniformly through the whole track; sometimes it is confined to particular places, or a congeries of distended blood-vessels, entangled in the mucous membrane, appear in clusters, to bespangle the surface with bloody spots; the cavity is sometimes also lined or filled with black grumous blood.”* It is true that in the

* Jackson's Outline of the History and Cure of Fever, page 187, et seq: (1798). I cannot but remark here, that in this excellent work, we find the more correct pathology of fever, both endemic and contagious, and its rational treatment, precisely the same as they have been lately recognized and established among us, and which are now the very reverse of what were entertained and followed by the great body of medical men in the year ninety-eight. The different modifications of fever, of late so ably illustrated by Dr. Armstrong, and other recent authors, were clearly pointed

more aggravated forms of yellow fever; the liver appears sometimes uncommonly large, black and distended, as if suffocated

out by Dr. Jackson in the last century; and these writers add little to the means of cure that were then described and used by him. He has distinctly and correctly noticed the simple, inflammatory, and congestive forms of febrile diseases; and, regardless of opposition and reproach, blood-letting, purgatives, and aperients, cold and warm affusion, with free ventilation, and exposure to the air, were his chief remedies. Thus we see, that above five-and-twenty years ago, when the phantoms, debility and putrescency, occupied the minds of all other physicians, and worse than paralyzed their energies, the enlightened Jackson alone possessed clear, comprehensive, and correct views respecting the pathology of fever, and was pursuing a line of practice at once rational and successful. These are unequivocal marks of transcendent genius and talent, of which few can boast. Indeed, all the writings of this amiable man evince a philanthropy, and an extent and accuracy of acquaintance with medical philosophy, that entitle them to universal attention and admiration, and which ranks their author among the best of men, and the most useful and distinguished of medical writers.

with blood; but this is no more than what takes place in the head, lungs, and other viscera.

In the second volume of *Les Memoires de la Société Medicale d'Emulation*, there is a valuable case, in which blood first passed from the stomach by vomiting, and then downwards from the bowels, attended by distention, constant distress, failing, irregular pulse, and cold sweats; the bowels obstinately refusing all impression from purging and injections; the mechanical irritation of the rectum, by the introduction of a large gum catheter its whole length, was followed by the evacuation of three large pots full of black, bilious matter; the abdomen was thus unloaded, and the patient, to all appearance expiring, gradually revived, and eventually recovered. The same thing happened a second time, and was relieved by the same means.

The distinguished M. Portal has lately turned his attention towards the investigation of the nature of these black evacuations, and has published a memoir on the subject. He believes that the black matter is not bile, having no trace of bitterness, nor dissolving, like bile, in cold water, nor giving any green colour to the water; but that it is pure blood, which, in the bodies of those examined after death, may be seen to transude from the blood-vessels of the stomach and intestines.

Mr. Howship has attended several individuals, labouring under severe pains and relaxation in the bowels, with bloody stools; and after considerable attention to these complaints, he is persuaded of their being essentially a morbid affection of the villous coat of the bowels. In one case, which terminated fatally at the second attack, he had an opportunity of

ascertaining this fact, by dissection; and the examination shews, that such discharges take place from functional disorder as well as from actual disease, which is agreeable to the extensive experience of M. Andral, Jun.:—“ The bleeding had taken place from the capillary or exhalent vessels, upon the internal surface of the great intestine, and although it was evident that every part of the bowel had been a bleeding surface, no part had suffered ulceration, nor was any part inflamed, though the whole was red.”*

The darker fluids, passed in cases of abdominal disorder, sometimes resemble thick, black, bilious stools; at others, they look like grumous, unhealthy blood. As these different appearances alternate in the same individual, under a single attack

* Observations on the Diseases of the Lower Intestines, page 99, (3d edition).

of disorder; and I have here produced sufficient evidence to prove, that the *bloody* motions are, for the most part, entirely discharged from the intestines; this fact becomes an additional and powerful support to the opinion, that the *black, tar-like* evacuations, are likewise derived from the same source.

Dr. Ayre, in some observations on disorders of the liver, considers the blood discharged by vomiting and purging, to be poured forth from the liver; but his arguments in favour of this origin of the complaints, are very inconclusive and unsatisfactory, and are totally uncorroborated by any facts. He relates the appearances, on dissection, of two fatal cases of *melæna*; but so far from being conclusive, they throw little or no light upon the subject. If any thing is to be gathered from them, it is that the bleeding took place from the intestines. The first is the case of a girl of

thirteen years of age :—the liver, on being cut into, had a blanched appearance, and scarcely any blood issued from it, or from the vessels leading to it; and from this circumstance it is assumed, that the blood discharged, per anum, must have come from that viscus. This will be allowed to be very infirm ground for such a supposition; besides, pathology can receive no assistance from the appearances in a single case. The liver was quite natural in its texture and bulk, and it is stated that the contents of the abdomen were perfectly healthy. I confess, I feel inclined to inquire, whether the internal surface of the bowels was examined throughout? as there is reason to fear, that in such examinations, this minute inspection of *the internal surface* of the *whole* of the bowels is too often neglected. In the second case, which occurred in a woman aged seventy-five, it is said, “ the same appearances were

exhibited as in the former case." Here, however, we are informed, that the intestines appeared equally blanched with the liver. Indeed, nothing remarkable presented itself, but the general deficiency of blood in the thoracic and abdominal viscera; but from this Dr. Ayre concludes, that the hæmorrhage certainly took place from the liver!—"This organ was completely emptied of its blood, as well as the right auricle and ventricle of the heart, and the large veins leading to it. The structure of the liver, and all the other organs, notwithstanding her age, appeared healthy. Both the liver and intestines had a blanched appearance. *The latter were lined throughout with a dark-coloured slimy matter, similar to what was passed after the hæmorrhage stopped.*"* Is not the last sentence

* Practical Observations on Disorders of the Liver, by Dr. Ayre, page 29, et seq.

unfavourable to the author's hypothesis? Does it not afford evidence of the disordered, and highly excited state of the internal surface of the intestines, and strengthen the probability of the bleeding having been derived from them?

I believe these cases of Dr. Ayre, and his reasoning, will be generally considered very meagre support to his opinions on this subject, after the *facts* brought forward above in confirmation of the reality of a quite contrary sentiment. We have seen, that frequently in these affections, blood is discharged from the mucous membrane of the mouth, affording presumptive proof of the same membrane lining the stomach and bowels being the true seat of hematemesis and melæna; since a variety of facts shew that this membrane, from its continuity of surface, is liable to be similarly affected through its whole extent, and therefore the affection of the mouth

becomes an index to the state of the stomach and bowels;—that the results of M. Andral's indefatigable attention to disorders and disease of the abdominal viscera, and of his extensive experience therein, is, that when the dejections are bloody, we may be satisfied the intestines are, for the most part, the seat of more or less intense inflammation;—that Mr. Abernethy has almost invariably found disease in the large intestines after death, under such circumstances, in the numerous examinations he has made; their villous coat being swollen, pulpy, and tinged with blood;—that in the concentrated endemic fever of warm climates, where vomiting and purging of blood are so frequent and alarming, and the stools look like tar or molasses, the proofs of the exceeding severity of the intestinal disease are incontrovertible;—and that the satisfactory experience of M. Portal convinces him,

that the blood may be seen in such states, transuding from the blood vessels of the alimentary canal, after death, which perfectly accords with the observations of Mr. Howship. These are multiplied proofs of the paramount intensity of intestinal irritation; and in their number and weight, they form a striking contrast to the scanty testimonies, and gratuitous assumptions of those, who will still harp on the insensible liver, and who can see little else than an affection of this organ in all abdominal disorders.

Dr. Ayre's book on marasmus, in assigning that state of body as possessing its common origin chiefly or exclusively in liver disorder, appears to me to carry us far backward in pathology. It is unnecessary to say, that it is a work not without value, but the chief feature of it is a distorted one; and the favourable reception it has met with from the profession, I

cannot but consider as another proof of the false light which overhangs this part of medicine in our country. Marasmus is much oftener met with as consecutive to intestinal irritation and disease, than to hepatic affection ; and it is to the first of these evils we are to look for the most exquisite examples of this species of consumption. The following case exhibits the principal features of this malady, as it commonly occurs, with the most usual appearances on dissection. We are here presented with a series of phenomena, which Dr. Ayre would have said, had their origin in the disordered action of the liver ; but which the knife of the anatomist proves to be dependant upon intestinal lesion alone ; and I appeal to familiar experience, to verify what I advance, that the symptoms and morbid appearances of this case may be safely received, as exhibiting those which accompany and con-

stitute ordinary marasmus, when it terminates fatally. The diarrhœa, and the light clay-colour of the stools at one period, would no doubt have been considered by the abettors of the bilious theory, as conclusive on the subject of the disorder's being chiefly, or altogether, one of the liver; but we find this organ to be healthy, and that the morbid phenomena were confined to the bowels.

“ Master M., a child of three years old, was at school in good health till January, 1810, when he became poorly, and was supposed to have taken cold. His appetite was impaired, and his bowels were relaxed. This, however, was scarcely noticed for some time. He enjoyed his usual amusements, and it was expected his complaints would wear off again. After some weeks, however, the child was sent home with a severe diarrhœa, the abdomen much swelled, and at times very painful. When

sent to school, he was a very hearty and strong child, but on his return was much altered, weak, and emaciated. As the disorder continued to increase, he became heated in the skin."

During the existence of these symptoms, the child was improperly treated, by being stuffed with mutton chops, beef steaks, and porter—the attending apothecary declaring that he would soon recover: but instead of this, he grew worse and worse, till his case was pronounced, by the same man, to be hopeless. "He still continued to grow thinner, and the fever, which was at first occasional, now became constant. The diarrhœa, however, was apparently on the decline, and this seemed to afford a ray of hope. The motions were, on some days, not more frequent than natural, but every now and then violent fits of restlessness and crying came on, and he complained of the 'belly-ache.'"

“ The abdomen was exceedingly tumid and hard, and excessively painful whenever in the slightest degree pressed. His water was observed to be becoming high-coloured; it was also rendered in diminished quantity. The appearance of his stools had changed, they were of a light clay-colour, as usually observed in disorders where the bile is prevented from flowing into the intestine. He had once, about this period, a sickness at the stomach, with vomiting; on which occasion the matter thrown up was found exactly to resemble, in smell and appearance, that which was passed by stool.”

“ At this time, I was first desired to see the child. The body was reduced almost to a shadow, the belly much swollen, very tense, and extremely painful. There was an obscure fluctuation in the abdomen. The motions were at this time less

frequent than in health. The child was perfectly sensible, and always called for his chair, when necessary. The pulse was pretty good, and beat 120 in a minute, but the little remaining appetite had now failed, so that he took nothing."

A suitable treatment was now instituted, but after languishing a few days, he expired.

" Examination."

" The body was inconceivably emaciated. On laying open the abdomen, the peritoneum was found in many parts adherent to the viscera. The omentum was considerably thickened by inflammation and disease. The whole bundle of intestines was found involved in one confused mass of adhesions. This had been consequent to a very extensive effusion of coagulable lymph into the cavity of the abdomen, in which was also a quantity of

serous fluid, that was removed in the course of the examination.”

“ This mass of coagulable lymph was next cut into, when a quantity of brownish-red fluid gushed forth, and with it the skins of some raisins. This circumstance proved, that some parts of the coats of the intestines had given way. The incision was then extended so as to expose more perfectly the cavity of this preternatural cyst; by this means, a circular hole, about a quarter of an inch in diameter, was discovered in the side of the small intestine. From this, the contents of the bowels had, in the first instance, escaped, and by it the fluids still ran freely out.”

* * * * *

“ On closer examination, the villous coat of the small intestines was in several places found to be destroyed by ulceration; but in no part, except where the opening

had been already detected, was the ulceration deeper than the muscular coat of the bowel." *

Dr. Pemberton called the marasmus of children, the infantile remittent fever, and considered it dependant upon derangement of the bowels. † He, however, professed himself ignorant of the pathological anatomy of the abdominal viscera, in this disorder, from not having enjoyed sufficient opportunities of examining the bodies of those who died of the complaint; but he has noticed one fatal case of this description, at the examination of which he was present. Here all the solid viscera of the abdomen were healthy, and the bowels were evidently the chief seat of the affection. Still, nothing is said by him of the

* Howship's Observations in Surgery and Morbid Anatomy, page 264.

† Treatise on Diseases of the Abdominal Viscera, page 158.

state of the internal surface of the intestines; probably, they were not examined, at least, with the care and attention that is desirable, in every such affection, as the phenomena immediately visible on removing the abdominal muscles, &c., render it probable, that inflammation, or some organic lesion, would have been discovered in their mucous membrane, had it been so examined. The subject of the case, was a child of four years old; and Dr. Pemberton remarks, “ the belly was swelled to a very large size, but there was not the least appearance of inflammation on the peritoneum, or upon any of the viscera of the abdomen, or any fluid in the cavity. The liver, pancreas, spleen, and kidneys, were natural; the mæstenteric glands were, in a small degree, enlarged:—*The intestines were distended to an enormous size, so that the colon measured seven inches in circumference,*

and all the other intestines were, in like manner, greatly distended.”*

When the stools are white, the secretion of bile is unquestionably suppressed; or, if secreted, it is prevented passing into the duodenum; but the copious, frothy, stools, which look like a quantity of yeast, or resemble soft pudding, seem essentially connected with a very disordered, or diseased condition of the bowels, especially the larger bowels; and the appearances presented, on dissection, of several fatal cases, set this question quite at rest.

Dr. Blackall has favoured us with a very interesting case, where the patient voided, during life, large quantities of a matter resembling yeast, in colour, fluidity, and effervescence. The man was supposed to have a *liver complaint*, and mer-

* Treatise on the Diseases of the Abdominal Viscera, page 167.

cury was accordingly given to him: by its effect on the internal surface of the bowels, he mended a little under its use, but afterwards relapsed, and died; when dissection shewed, that the mischief had its seat in the bowels only, the liver being healthy. He suffered, altogether, more from flatulency, dyspepsia, and dejection of spirits, than from any precise pain: sometimes, however, when questioned, he would acknowledge an obscure uneasiness and fulness, towards the lower part of the abdomen, on the right side. “ The liver was natural, both in size and structure, and the gall-bladder full of a yellow healthy bile; but, on tracing the intestines, we found the cæcum, and its appendix, with some of the neighbouring parts, involved in a mass of scrophulous adhesions, which, when taken out, and dissected at leisure, presented the following appearance:—The disease began about

two inches above the termination of the ileum. Its inner membrane was, to the extent of a crown-piece, covered with spots of lymph, and there were two or three small ulcers. The whole of the inner membrane of the cæcum was completely destroyed by ulceration, and its other coats much thickened; the beginning of the colon in the same state, for five or six inches further nearly healthy, and then again, for a short space, thickened and ulcerated, in a spot where, by a sort of unusual course of the intestine, it had doubled down upon the cæcum." Dr. Blackall adds, "I apprehend a slight degree of this disease to be not unusual. I have seen four cases of it, to an extraordinary extent, where the discharges, by stool, greatly resembled yeast in their appearance, and, in one instance, were nearly raised, by their effervescence, over the sides of the vessel. All the patients

had this in common, that they died extremely emaciated, and after a most tedious lingering. In all, there was much flatulency, and in some, a croaking noise of air, apparently seated in the ascending arch of the colon, and sometimes producing such a projection there, as almost to give suspicion of a ventral hernia:”—symptoms, I presume, strongly indicative of intestinal disease. It is very correctly observed, by this judicious physician:—“Writers describe this remarkable complaint imperfectly, and, when they notice the occurrence of yeasty discharges, they generally seem to refer them to an obstruction of the liver exclusively. But many circumstances, particularly the preceding dissection, prove the large intestines to be much engaged in this disorder.”*

* Dr. Blackall's valuable Observations on Dropsy, page 108, et seq. (1813).

In the Medical Repository for October, 1822, there is the following:—"We had, last year, an opportunity of inspecting the body of a naval officer, who had served long in the West Indies, and who died, at an advanced period of life, of diarrhœa gypsata. On dissection, the liver was found tuberculated, the spleen enlarged, and condensed in structure; the pancreas was much enlarged, and presented the appearance of incipient schirrus, in more than one part. The mucous coat of the digestive canal, *from the mouth to the anus*, presented marks of disease, which were greater in some situations than in others. It was generally more vascular than natural, and, in many places, was inflamed and ulcerated. The inflamed parts, surrounding the ulcerations, were much thickened. The muciferous, or follicular glands, possessed a dirty-grey colour, and were enlarged to various sizes,

so as to give, in some places, a granulated appearance to the mucous surface; in others, a number of small ulcers were dispersed through it, apparently in the situation of the orifices of the mucous glands. These ulcers penetrated deeply into the villous coat, and were, in some parts, distinct; in others, they coalesced, and gave rise to extensive ulcerations, with thickened and inverted edges, or to a foul, dark, and rugged condition of the internal tunic. These lesions were more extensive in the rectum, colon, lower part of the ileum, duodenum, in the vicinity of the pylorus, in the pharynx, and more slightly in the jejunum, and commencement of the ileum. The florid, thickened, ulcerated states of the palate and fauces, were apparent for some time before the death of the patient."

The respectable editors of the above journal, whose favourable testimony must

be considered no mean support to any opinion, have been led to take the same view of the pathology of this peculiar kind of diarrhœa, as is here maintained. On this subject, they wisely differ from Dr. Good, (who is evidently too fond of making the liver a capacious vortex of disease), observing, that from the character of these derangements, as well as from other circumstances, they have concluded the disease to be essentially one of the follicular glands of the intestines, from its commencement, which terminates in their enlargement and ulceration; and that the alvine dejections are characterized by the copious, and vitiated secretion to which their disorder gives rise. They had two cases of this disorder under treatment, when this case was written, neither of which had received any benefit from the active remedies prescribed.

Not only does an impartial considera-

tion of the attending phenomena, and of the economy of the digestive tube, contrasted with that of the liver, lead to the conclusion, that, for the most part, all the cases of abdominal disorder, in which copious stools of either black, yeasty, bloody, or any other coloured matter are conspicuous, are essentially connected with a permanent excess of irritability in the intestines, wholly independent of the state of the liver; but I believe the dissections of the many fatal examples on record more than bear me out in the assertion. In a considerable majority of these instances, the liver presented no traces of disease, or inflammation, while the organic lesions of the intestines were almost invariably present;—either simple inflammation, of various shades; thickening or softening of one or more of the coats; tubercles; or ulcerations, being conspicuous, and not seldom unaccompanied by disor-

ganization in any other of the abdominal viscera. The causes, symptoms, and post mortem appearances of ordinary diarrhœa, dysentery, and lientery, I consider as clearly pointing them out to be originally diseases of the mucous surface of the bowels; the liver, if disordered, being affected secondarily. The same may be affirmed of cholera morbus. These being complaints remarkable for the quantity of the intestinal discharges that take place under them, they lend important proof, from analogy, of the correctness of the pathology here advanced, of the disorders which form the subject of consideration in these pages.

M. Andral, Jun. whose laborious and extensive researches on the pathological anatomy of the digestive tube, entitle his sentiments on this point to great deference and attention—remarks, that diarrhœa, dysentery, and lientery, have been for a

long time looked upon as diseases entirely independent of intestinal inflammation ; but it is indubitable, that in a very large majority of cases, the intestines of individuals labouring under diarrhœa, whether complicated or not, with dysenteric symptoms, present evident marks of phlegmasia. And he further judiciously observes, that dissection establishes the fact, that the same kind of organic lesions in the intestines, will in some persons produce dysentery ; in others, diarrhœa.

An objection has been raised to the idea of the yeasty, dark, black motions, frequently voided in the prevailing disorders of the digestive organs, being vitiated secretions from the bowels ; because all the secretions poured into the intestines, or supplied by them, except the bile, are for the most part colourless : and it has therefore been urged, that any change from the natural appearance which takes

place in the fæces, must result from a change of the bile. The former assertion is true, if it be confined to a state of health; but how completely is it invalidated by familiar experience, if it be meant to apply also to a diseased condition. The urethra of a healthy man secretes a colourless, limpid fluid; but when irritated and disordered, its secretions become white, yellow, or green, opaque and stinking. The same change takes place under disorder in the serous membrane lining the chest, whose healthy secretions are without colour; and so it is with the secreting membrane of the bowels, and of every other part. In health, their secretions are for the most part colourless, but no bounds can be set to the change they may undergo when exposed to irritation: then they are, at different times, found of all colours, from the pure, modorous white, to the concen-

trated, offensive black. It is not a little surprising, therefore, that the colour of the secretions of a healthy part should be brought forward to prove, that the same appearances are exhibited by them under disorder and disease.

We have enumerated the power which mercury possesses, in restoring unnatural stools to their healthy appearance, among the causes of the supposed frequency of liver complaints. The opinion which has much prevailed of late in the profession, that this mineral exercises a specific action on the liver, far more immediate and efficient than it exercises on any other secreting organ, is an error that has grown out of the striking change often produced by it in discoloured, offensive motions, and from its almost exclusive influence over the acute, bilious disorders of India. If it is shewn in these pages, that such unnatural alvine evacuations are much more

closely connected with an unhealthy state of the internal membrane of the bowels, than with disorder of the hepatic viscus; it has been proved that the notion of mercury's exerting a greater power over the secretions of the latter, than it does over those of the former, derives no foundation or strength from the signal change in the stools just alluded to. In the acute *bilious* disorders of India, (as they are called), calomel is unquestionably superior to every other remedy. In them it certainly seems to originate specific effects, and requires to be employed in large, quickly repeated doses; but nothing satisfactory can be deduced from this circumstance, in regard to its having a more direct and powerful influence on the liver, than on the intestines and mesentery, in the ordinary chronic maladies of the abdominal viscera met with in this country: for, independent of the sensible and great difference in the

complexion and severity of these affections of the two climates, my researches lead me naturally to question, whether this unequalled efficacy of calomel in the diseases of the East, is owing to any such superior operation on the liver. Its use in acute hepatitis, is certainly dependent upon an operation of this kind, but cholera morbus and dysentery, two of the most frequent and dangerous diseases of that region, and in which the powers of mercury are so conspicuous, are affections of the alimentary canal: and it appears incontrovertible, that in the endemic fevers also of India, which may likewise be affirmed of the fevers of the West Indies, it is disease of the mucous surface of the digestive tube, that is principally concerned in producing the symptoms visible under the attacks, since this part generally presents on dissection, the most intense appearances of organic lesion, and sometimes none are

found elsewhere. I think it will not be said by medical men of observation, after due reflection on the results which have followed their employment of mercury in the different abdominal maladies, that, in actual practice, they have found it possess a greater curative power over unequivocal disorder or disease of the biliary organs, than it has in a similar condition of the intestines. The *disorders*, popularly termed bilious, in reality have their seat in the stomach and bowels; and, if the mercurial oxides are commonly of imperfect use in intestinal disease, it should be remembered also, that in the *disease* of the liver, it is no longer a doubt whether they are of much or little service.

The fact is, that this mineral possesses, in a higher degree than any other known medicine, the power of changing the condition of action in the extreme vessels of the circulating system throughout; it is

for this reason, that it is so important an instrument in the hands of the physician in so many and apparently dissimilar complaints; and it is proved by experience, to exert no greater influence over the secreting vessels of the liver, than it does over those of the intestines and mesentery.

3. Of all our organs, the stomach is that which in general the most effectually resists positive disease. It will sustain considerable irritation and disorder for a long series of years, without undergoing any alteration in its structure; but, from the liver possessing only very inferior vital properties, it is much less able to resist the disorganizing influence of irregular or violent action; and as it participates in the disorders of the first and second stomach, disease from this cause frequently fastens upon it alone, and the existing complication of evils sometimes terminates in death. Upon the dissection

of bodies thus affected, the liver will present appearances of disease, when there are no traces of it in the stomach or duodenum, and very few and slight ones in the other abdominal viscera. This occurrence, particularly when the patient's symptoms during life did not clearly denote the existence of hepatic mischief, which not unfrequently happens, has confirmed many of the profession in the popular notion of the exceeding prevalence of *liver complaints*, and has been another cause of increasing and perpetuating the error. The difficulty with which disorganization is induced in one, and the greater facility with which it originates in the other organ, is forgotten; and, therefore, the relation which the above mentioned circumstances bear to each other, as cause and effect, is unperceived and reversed. Instead of the organic injury of the liver being considered a con-

sequence of long continued and severe derangement of the stomachic functions, it is regarded as an original, independent affection; and sometimes, even as the sole complaint, notwithstanding that the stomachic irritation may almost always be recognized during life as the primary malady, existing long before symptoms supervene, which decidedly denote hepatic mischief:—thus, *liver complaint* still engrosses the attention of the practitioner, and presents itself to his imagination on all such occasions in the living subject; and this reversion of causes, drawn with confidence from actual dissection, stands as a humiliating memento of the fallibility of medical evidence, when the physician has a favourite hypothesis to support. Dr. Philip, in his incomparable work on indigestion, has noticed this source of mistake.

I think there can be no difficulty in

conceiving that disorder, or disease, may and does often exist for some time in the liver, without the stomach participating, and without the bowels being very sensibly affected; but it does not consist with our physiological knowledge, or with observation, to suppose that the reverse of this ever occurs. The insensibility, and the natural functions of that organ, encourage this conclusion; besides, it is admitted, that we are not unfrequently surprised in finding marked disease in the liver after death, when the patient during life manifested no symptoms of such complaint: this gland is one of waste rather than of supply; and it is reasonable to infer, therefore, that a partial interruption or irregularity in its healthy actions may be borne, for no short period, with little injury, and without its sensibly influencing the functions of the other assimilative viscera. Not so with

the stomach. That is an organ of remarkable supply, of the most delicate and extensive connexions, and is, perhaps, the most irritable part of the body; in consequence of which, it cannot be disordered without involving the liver and bowels in the same morbid association; and it is particularly worthy of attention in our day, that this is ordinarily the natural course of invasions in the disorders under review.

Mr. Abernethy, whose great improvements in his profession, demand and engage general attention, with all his attachment to affections of the chylo-poietic viscera, and partiality for blue pill, is not one of those who consider the liver to be the root of the evil in these disorders. If I understand him right, instead of considering this organ to be the chief and primary seat of invasion, as is generally done, he takes that view of the subject which I would urge upon public atten-

tion, regarding the stomach, as commonly the first affected, then the intestinal canal, and lastly the liver. He remarks, "when digestion is imperfectly performed, the functions of the intestinal canal will soon participate in the disorder of the stomach. *Under these circumstances*, the secretion of bile will also probably become irregular." Again, "It is fair to infer, that where general disorder of the digestive organs takes place, those fluids, which produce the changes that the food undergoes in them, are deficient or depraved; and, consequently, that digestion and the subsequent processes must be imperfectly performed. The liver is likely to participate in the disorder, and the biliary secretion to be diminished or vitiated. This circumstance admits of ocular demonstration; and I have, therefore, considered it as an evidence of a more or less general disorder of the digestive organs. A very

reasonable objection may, however, be made to considering the derangement of the function of the liver as a criterion of those of the stomach and intestines; since the liver is independent of the latter organs, and may be the subject of a disorder confined to itself. In some cases, also, the alimentary canal may be affected without disturbing the liver. Such circumstances may happen occasionally; but they are not ordinary occurrences, and should be considered as exceptions to general rules, which do not militate against their common operation. *In general, affections of the former influence the functions of the latter.*"*

There is reason to fear, from the almost exclusive attention paid of late to the liver, that, in conducting the dissections in such

* Observations on the Constitutional Origin of Local Diseases, page 42.

cases, the state of the digestive tube has been very often either partially or wholly disregarded. These examinations have been made in a way likely to propagate the belief of the universal spread of disordered and diseased liver, but not calculated to shew the real state of the whole of the organs concerned, and the relative frequency of intestinal disease. If the biliary organs have been found injured in their structure, it has been too frequently considered sufficient to account for every symptom that occurred during life ; nothing was thought worthy of particular notice in the abdominal cavity after this, and the dissection has accordingly been hastily concluded. Had less attention been directed to these parts, and more to the intestines, in examining the bodies of individuals who have died from a diseased condition of the assimilating viscera, the relative state of the latter would be better

known, and have gained due attention. "It has frequently happened to us, to find the mucous membrane evidently inflamed, disorganized, and ulcerated, in portions of the intestines which, when seen and examined externally, had been regarded as healthy. An important error may therefore be committed, if, as is sometimes done, we pretend to judge of the healthy or morbid condition of the intestine by the appearance of its external surface."*

From what has now been said respecting the appearance of organic injury of the liver, in protracted disorders of the digestive organs, it must not be supposed that this is a common occurrence, in the examples we daily meet with of these multiform complaints, the great proportion of which are of recent origin. I

* M. Andral, Jun.

could not pass by the fact of disorganization being sometimes found in this viscus in these cases, when there is no such thing elsewhere in the abdomen, without adverting to it as a cause of increasing, among the profession, the idea of the great frequency of this disease; but as I believe it may be safely asserted, that fifteen cases out of sixteen, of what are popularly termed bilious complaints, are disorders of the digestive canal; so I think it indisputable, that in four cases out of five, of what are usually designated confirmed liver diseases, there is no positive disease in the hepatic region, the affections being examples either of aggravated functional disorder of the stomach and intestines, or of disease in some part or parts of their course. When chronic inflammation, induration, ulceration, or any other organic lesion, does supervene an unhealthy condition of these parts, I

think morbid anatomy proves, that such consequences are much more frequently recognized in the bowels, than in the gland secreting the bile. Among the several persons examined by Mr. Abernethy, and referred to at page the fifty-sixth of this Essay, it was only *in some* cases the liver was diseased, whereas such a condition occurred *in every* instance in the intestinal canal, and was there of great extent and severity. In other instances, alluded to at page the forty-seventh of his Observations, there existed intense disorganization in the intestines, but no mention is made of any unhealthy state of the liver. It is more than probable that Dr. Blackall's five cases (see page the eighty-third) were all of this character. We are certain one of them was so, (and in this mercury was administered, under the idea of liver disease) and we must conclude the rest were of

the same nature, from the exact similarity of their symptoms and termination. In Mr. Howship's observations on disorders of the lower bowels, five cases are related, in which abdominal pain and uneasiness, anorexia, debility, emaciation, and frequent copious stools of bilious, dark, offensive matter, were the prominent symptoms. They are correct specimens of what are now very frequently considered liver complaints; but on dissection, disease was ascertained to be confined to the bowels, the liver being unaffected.

The best continental writers on abdominal derangements are unable to embrace the English notion of the paramount frequency and importance of liver disorder or disease. The laborious observations of Broussais, Andral, and others, have made them acquainted with the frequency of intestinal lesions; but the liver has comparatively seldom been found by them

thus invaded. They have uniformly been struck with the severe, complex, and extensive morbid actions, constantly arising from gastric and bowel disorder; but they have yet to learn, that actions, still more intense and complicated, unfailingly attend upon hepatic derangement. In this point, I think that the French and German practitioners, as a body, are superior to us, and the reason is obvious. In their practice and researches, they are not misled by bilious theories, and notions of the omnipotent powers of calomel, and consequently they have not fallen into those misconceptions which, from the present fashionable opinions in England, prevail among us.

The late Dr. James Curry, who, regarding almost every patient with "jaundiced eye," could see little affecting them but liver disease, was in the habit of putting his hand to his right side, and saying, he

was assured there was a very small portion of liver left there. Some might think it was not wise in him to make so frequent a confession of this kind, since, if a man could live for years in tolerable health, (which was his case) with only a very small portion of liver, and that probably in a state far from healthy, the conclusion generally drawn from thence would be in no small degree unfavourable to the doctor's opinion, of the supreme importance of the healthful actions of this viscus, and of the absolute necessity of resorting to the free use of calomel in its derangements. However, he was totally mistaken in his own case, for after death the liver was found to be quite sound!—a circumstance not much in favour of his discriminating powers. Yet authors are not wanting, who speak of the practical success of this physician, attributing it to his superior acquaintance with hepatic disorders.

To me, this success and discernment appear equally problematical. I know of more than a few who have fallen victims to his practice, but am not informed of any who have been restored to health by its effects.

Dr. James Hamilton, Jun. in his very useful observations on the cure and abuse of mercury, observes, “ As it is the object of the author to improve the science of medicine, and not to expose the errors of individuals who practise it, he avoids mentioning many instances which have fallen under his observation, where patients were pronounced to be labouring under an affection of the liver upon the most superficial inquiry into the symptoms. One old lady, nearly seventy years of age, was actually put upon a severe course of mercury by a physician, who declared that he felt her liver to be enlarged, though the examination was made

while she lay on her left side in bed, and without removing her dress, which consisted of a thick flannel shift, besides the ordinary linen one. In this case, however, the liver proved to be quite sound." I have lately seen an instance almost precisely similar, and my experience painfully convinces me, that the occurrence referred to in the former part of this extract is sufficiently common. Dr. Hall remarks, "I have this day had the opportunity of ascertaining, by a careful dissection, that in a case of *mimosis decolor*, long considered a case of 'liver complaint,' there was no perceptible disease of that or any other viscus."*

Mr. Abernethy and Dr. Hamilton, Sen. have given to the intestinal canal, their full share of effect in the prevailing *bilious* disorders, and their treatment is ration-

* Essay on the *Mimoses*, page 142.

ally directed towards obtaining healthy secretions from them. They believe, that the unhealthy colour of the fæces, and all the prominent symptoms of indigestion, are intimately connected with a degeneracy in the quality of the alimentary secretions; and their mode of cure rests upon the principle, that “the state of the bowels has an important and remarkable influence over that of the stomach, of the internal mouth, of the external surface, of the circulation, and of almost every organ of the human frame.”* How far removed is this view of the nature of those disorders of the general health, now so very prevalent, from that commonly taken, in which the liver has an unrea-

* Hall on Diagnosis, first part, page 129. This sensible and accurate writer justly observes, “A deranged state of *the bowels* may be deemed the fertile and immediate source of most disorders of function, and the more remote cause of many organic diseases.”

sonable degree of importance attached to it. And how different this principle of cure from that too generally acted upon, in which large and reiterated doses of a debilitating, and highly stimulant mercurial, is resorted to!—a means, it is conceived, not very well adapted to restore the impaired energies, and natural secretions of any organ.

4. The great number of our countrymen who annually return from the East and West Indies with disorder, or disease, in the biliary organs; and the exclusive influence of mercury over the acute diseases of India, have likewise operated, in no mean degree, as causes in the spread of what may very properly be termed the bilious mania. Man is prone, especially in medicine, to form erroneous associations. Persons returning from India, are naturally led to talk of the universal nature and great fatality of liver diseases

in that country, and to extol the inestimable value of calomel; hence, they readily imagine every considerable disorder of the digestive organs, which they meet with among their friends and acquaintances in England, to be no other than a *liver complaint*; and suppose, that the medicine from which they have so often derived immediate and striking relief under an almost vertical sun, must prove the most suitable and powerful remedy also to their friends at home. The valetudinary are not seldom prevailed upon to receive these crude notions, and to pursue the practice to which they directly lead. The individuals giving and receiving this information, forget the vast difference existing between the climate of Great Britain and that of India, and are ignorant of the powerful impression produced by climate, on animal as well as vegetable life. They are not aware how

widely the ordinary diseases of the two countries differ from each other in character; those of tropical regions being for the most part extremely acute, and demanding the prompt and vigorous employment of very active measures; while those under view, in temperate climates, are generally rather chronic than acute, indicating no immediate danger. This applies especially to the biliary organs. Reiterated experience evinces, that those who reside within the tropics, bear, and require much larger doses of mercury, than can be administered with safety to those who inhabit the cold and temperate zones; and that much more striking benefit attaches to so free a use of it in the diseases of the former, than can be obtained from the most judicious administration of it in those of the latter. The blue pill, which we find so valuable at home, is useless in the East Indies; where-

as, twenty-grain doses of calomel, which no English practitioner would be justified in prescribing, unless in urgent cases, and under peculiar circumstances that very rarely occur, are often ordered in India, twice, or thrice, or even oftener in the twenty-four hours, and with admirable effect.

As an instance of the powerful influence of climate, in modifying the operation of remedies, it will not be improper to notice the fact, that the doses of medicines given in England, excite universal astonishment among the faculty in Italy. The extract of henbane is usually administered among us in doses of five grains, three times a day, or oftener; yet, Dr. Harrison, in a letter to Dr. Paris, observes, that when he gave it in Italy to the extent of three grains thrice a day, it produced in two patients, a temporary amaurosis, or loss of sight, “ which disap-

peared, and again recurred, on the alternate suspension and administration of this medicine: and it deserves particular notice, that these very patients had been in the habit of taking similar doses of the same remedy in England, without any unpleasant result. Now, that this depended upon an increased susceptibility of the patient in the warmer climate, rather than an increased power in the remedy, is unquestionable, since the extract which was administered in Italy had been procured from London.”*

5. For several years past, there have been medical men of talent and character, both physicians and surgeons, who after a residence of some years in the East and West Indies, have returned to practice in their native country. They have had to encounter, almost daily, the most formi-

* Paris's Pharmacologia, Vol. 1.

dable affections of the liver, and alimentary canal, abroad ; and have grown much attached to calomel, from its excellent and unequalled powers in those diseases. Upon returning to England, they have unfortunately considered the liver to be the root of the mischief, in the greater number of the disorders of this country, as well as in those of India, and have therefore used calomel with great freedom, in their subsequent practice at home ; and by their writings, and representations, have prevailed upon a large proportion of us to embrace their opinions, and adopt their mode of treatment. These opinions, and the manner of cure, have been indefinitely, and injudiciously described, and still more vaguely imbibed. In regard to the seat of the evil, what applies, in truth, to the alimentary canal, has been from plausible, though insufficient reasoning, assigned to the liver ; and, in point of

treatment, that which is suitable, with any force, only to acute invasions, has likewise been extended unhappily to chronic affections. This is a principal cause of *bilious* disorders, and their remedy, calomel, becoming so highly fashionable in this country.

These gentlemen have fallen into the same error as their unprofessional brethren from India, in disregarding the great difference in the two climates, and in the effects of remedies uniformly resulting therefrom. It is strange and surprising, how professional men of ability should imagine, that because chronic hepatitis is a prominent disease in the East and West Indies, it must be so likewise in England. With as much reason might it be supposed, that pulmonary consumption, which is so pre-eminently destructive throughout Europe, is also a wide-spreading and fatal complaint within the tropics.

Yellowness of the eyes has often been considered a certain sign of diseased liver, and the same may be said of a sallow or yellow hue of the complexion: but these symptoms are very frequently seen, when functional disorder exists in the stomach and bowels only. That they are not to be depended upon, as proofs of positive disease in the liver, is certain from such cases having been seen, where neither yellowness of the eyes or skin, were present,—instances of which are related in the writings of Dr. Farre, and Dr. Blackall. It appears to me, that these symptoms have been too hastily supposed to indicate, at least, considerable disorder in the biliary organs, with more or less of obstruction there; for where such symptoms were observable, dissection has failed, in many instances, to discover vestiges of these irregularities, while marks of great disorder have been visible in the intestines,

and appearances of the absorption of bile from that canal were decisive. Hence we are led to believe, that jaundice, and yellowness of the eyes, are not unfrequently consequences of bowel derangement, unaccompanied with any alteration in the qualities of the bile:—under such circumstances, this fluid is secreted in a healthy state, but from an unnatural condition of the bowels, they do not affect that change in it which takes place in health; and it would appear, that they are moreover so affected as to absorb it from their surface, and thus it enters with the chyle into the mass of circulating blood. Dr. Scudamore enumerates a general sallowness, or partial stains of yellow in the skin, as the occasional symptoms of indigestion in the intestinal canal;* and Dr. Hall is persuaded, that jaundice, and a continued though

* Treatise on Gout, page 85, (4th edition).

variable state of sallowness—of yellowness or icteric code hue, very frequently accompanies both the acute and chronic form of the disorders of the digestive organs.*

In the Medical Repository for March, 1824, there are two cases related by Dr. Chisholm of Canterbury, in which yellowness of the eyes and skin, and other symptoms that I consider to denote derangement of the digestive tube, were prominent features; during life, they were considered as examples of liver disease, and treated accordingly, but dissection proved the biliary organs to be perfectly healthy. These cases afford additional and unequivocal evidence of the truth of many of the opinions advanced in this essay, and as the first case is particularly interesting, I have transcribed it at length.—“ Richard Sutton, ætatis 25, servant in husbandry,

* Essay on the Mimoses, page 78, and 116.

was admitted into the Canterbury Hospital, April 18th. This poor fellow was in a very debilitated state, and could not give any account of himself. From a person, however, who accompanied him, I learned that his symptoms were, ‘sickness, inability to retain any thing on the stomach, very obstinate constipation,’ and that he had some time before laboured under fever and inflammation.—Habeat quam primum hydrarg: subm: gr. x. Extr: hyoscyami gr. v. Inj. enema purgans. Pil. hydrarg: gr. v. P. Ipecac: comp. gr. x. horâ somni. On visiting him next morning, I had leisure to make a closer examination. *Skin of a yellowish green hue, as were the conjunctivæ*, (as described by Dr. Baillie, in green jaundice). Great prostration of strength, and flatness of the abdomen. Pulse scarcely perceptible at the wrist. No fulness of either hypochondrium. On applying pretty severe pressure to the

right lobe of the liver, he appeared to wince. Urine natural in quantity, but rather highly coloured. *The calomel has procured several dark, offensive stools.* Sickness only after eating. Retained the Dover's powder, which, with the blue pill, is to be continued every night. Cathartic mixture every morning, and the effervescing mixture occasionally.

“ This plan was persevered in until the 25th, during which time I had several opportunities of shewing this case to my professional friends, who agreed with me in thinking, (though the case was obscure), that *the seat of the disease was the liver.*

“ 25th. Omitt: Pulv: Ipecac: Co.—Cont. Pil: Hydrarg: Illin. Semi-drachma Ung. Hydrarg. Fort. Sup. reg. Hypochon dextr. quâque nocte.

“ The greatest attention was paid to the different symptoms. The bowels became

more regular in their action, and the dejections more natural; the sickness, too, was less distressing. Nourishing food, with wine, was given; as well as bark, aromatic confection, &c. &c. The treatment, however, was of no avail: he died on the 20th May.

“ Dissection.—I examined the body 24 hours after death, when I found *the liver perfectly natural in size and structure; the gall-bladder about one-third full of healthy bile; the stomach smaller, and more flabby than common; no disease of the cardia or pylorus; pancreas, spleen, kidneys, and urinary bladder, natural. The intestines had a contracted appearance, and their villous coat, (as did that of the stomach,) readily yielded to the application, though slight, of the finger-nail.* The lungs were studded with tubercles in different stages, and very firmly attached to the pleura costalis, on both

sides, requiring very great force to separate the adhesions. The pericardium contained about an ounce of fluid, and was here and there spotted with coagulable lymph on the internal membrane. I thought the heart was smaller and softer than natural, but could not discover any disease in the mitral, semilunar, or tricuspid valves; neither was there any communication between the ventricles; the foramen ovale was closed. On removing the scull-cap, I was astonished to find the vessels, even the most minute, gorged with blood. The ventricles contained more fluid than usual, and there was evidently a softening of the central and medullary substances."

This extract would have been perhaps still more useful, had the alimentary canal been more minutely examined, and the morbid appearances there more fully noted; however, as the description stands,

it proves that the chief disease was in that canal, and it is most probable, that all the unhealthy phenomena found in the head and chest, derived their origin from the intestinal affection. Dr. Chisholm considers this “ a very vexatious and unsatisfactory case;” but would it have appeared so, had liver disease been a less frequent subject of consideration with the physician, and the digestive tube obtained that attention, which its more delicate organization, and its more important offices, demand?

This relation proves what I have already observed, (page 56), that, so far as the colour and fetor of the stools are concerned, it matters little how healthy the bile is, if the digestive tube is severely disordered, or diseased; for we perceive, in this instance, that the liver was sound, and its secretion apparently neither faulty nor deficient, for the gall-bladder was one-

third full of healthy bile, yet the bowels were obstinately constipated, and the motions produced by the aperients administered, dark and offensive. Precisely the same phenomena have been discovered in other similar cases of intestinal disease.

The second case, alluded to above, was one of hæmoptysis, which terminated fatally, and where the face, during life, “was generally of a cadaverous hue; and the conjunctivæ much tinged with bile.” Dr. Chisholm observes, “Having heard that this patient had been in the hospital (I believe more than once) before, and *that his complaint had been considered an affection of the liver, and treated as such, I proceeded to examine that viscus very minutely; its size and structure were natural, but of a deeper colour than usual; the other abdominal viscera were likewise healthy.*” It is evident, therefore, that the

yellowness of the eyes in this patient also, which the physician regarded as dependant upon hepatic mischief, was really owing to functional disorder of the digestive tube.

A sensation of fluttering at the pit of the stomach, has also been enumerated by Dr. Pemberton, and others, among the signs characteristic of chronic disease of the liver; but my experience convinces me, that it is rather a symptom of indigestion in the stomach or bowels: and I have known Brandish's alkaline solution remove it, after mercury and other means had been resorted to in vain. The same may be said of an intermitting pulse. It has been wisely remarked, that, "a sense of *fluttering* about the heart, or at the scrobiculus cordis, is the *universal* symptom of disorders of the digestive organs, and of nervous affections; whilst it seldom or never occurs in organic dis-

eases.”* And that, “ in organic diseases, the pulse is generally frequent and small, but regular. In disorders of function, it is usually of the natural size and frequency, but often intermittent and irregular.”† From the nature of the symptoms, we cannot be surprised if this fluttering and intermittent pulse, (particularly the latter), should be the cause of much uneasiness to the subjects of them, and such they almost always are. Therefore, it is gratifying to be able to dissipate the fears arising from this source, by assuring the individuals thus afflicted, that there are few facts in medicine better established, than that these are symptoms of irritation and disorder, but not of disease. “ Some books speak of intermitting pulses, as dangerous signs, but, I think, without reason; for

* Hall on Diagnosis, first part, page 105.

† Ibid. (page 125).

such trivial causes will occasion them, that they are not worth regarding in any illness, unless joined with other bad signs of more moment.”*

Judging from the frequency with which we hear of our neighbours being afflicted with “*liver complaints*,” it would seem that this disease is more common than even consumption. It is accurately calculated, that this affection of the lungs carries off prematurely one-fourth of the inhabitants of Europe, and that, above five thousand persons die of it annually, in London alone! Yet, I appeal to any unprejudiced person of respectability, who has an extensive acquaintance, and especially to those whose custom it has been to mix at Bath, Cheltenham, Brighton, &c., among the valetudinary and convalescent visitors to those favourite

* Heberden's Commentaries, page 510.

resorts, whether, so far as report goes, disease does not appear, at least as frequent in the liver, as in the lungs? Notwithstanding, if the bills of mortality be examined, it will be found that hundreds of deaths from consumption are recorded every quarter, whilst there is hardly a trace to be found in them of those who have died from diseased liver. It is acknowledged, that disease of the liver is in general by no means so certainly, or rapidly fatal as that of the lungs, and that it not unfrequently originates other complaints, which prove fatal, (as dropsy), from which cause the hepatic disease is not recognized as the original source of all the subsequent mischief; but if it were half so common as is conjectured, there is no doubt we should find at least fifty cases of death from this disease noted in the quarterly returns of the bills of mortality, where there is now in fact but one.

Formerly, disorganization of the liver was rarely found but in middle-aged and elderly persons; now, it seems to be considered almost as common in the young as in the old, and is not unfrequently recognized even in children. I am acquainted with a physician, who has gained great credit with a family of some distinction, by curing one of the little children of a "*liver complaint.*" Yet, Dr. Baillie remarks, in his work on Morbid Anatomy, that this disease is hardly ever met with in a very young person; an opinion that does not admit of just contradiction. Notwithstanding, I have known several young persons who were pronounced to have this fashionable disease, and who rapidly emaciated and grew worse under an active course of mercury, some of them dying in a state of salivation! Who can say that these were cases that would not have done well, if a ra-

tional and suitable mode of treatment had been instituted?

It were well, if the idea of the universality of bilious and liver disease had been the only error in this point, introduced among us from abroad. Were this the case, it would have hardly been worth the trouble of refutation; but a practical evil has resulted from this error in language, and the active mercurial oxides are improperly represented to be the sure and only remedies for the major part of the prevailing disorders of the digestive organs. Thus, the constitutions of the inhabitants of this island have been, within the last twenty years, mercuralized without mercy, and, consequently, scrophula, consumption, palsy,* and indiges-

* That scrophula and consumption have much increased in frequency in Great Britain, within the last thirty years, is generally admitted; that it is the case

tion, all diseases of debility have rapidly and greatly multiplied; and as long as this mineral is so freely and indiscriminately administered, they will continue to increase both in number and obstinacy. Not only are “*bilious and liver complaints*” much less frequent than many

with stomach complaints is notorious. The following authentic record of the number of deaths from apoplexy and palsy that occurred in London in the four last years of the seventeenth and eighteenth centuries, shows how alarmingly these diseases also are increasing upon us.

<i>Years.</i>	<i>Died of Apoplexy and suddenly,</i>		<i>Died of Palsy.</i>		<i>Total Mortality.</i>
1696	109	.....	17	..... 18,638
1697	111	.....	27	..... 20,970
1698	116	.....	21	..... 20,183
1699	106	.....	24	..... 20,795
1796	225	.....	73	..... 19,288
1797	214	.....	99	..... 17,014
1798	224	.....	86	..... 18,155
1799	249	.....	105	..... 18,134

See Willan's Reports, edited by A. Smith,

suppose, but when disease has really invaded the structure of the biliary organ, it is very questionable whether an active use of any mercurial preparation is the best treatment that can be adopted. This point we shall consider presently.

There are three different kinds of disorders of the digestive organs, each having its seat principally, if not exclusively, in a particular organ, and requiring a somewhat different treatment, though one species seldom occurs, and exists for any time, without in some degree occasioning the others. I mean that, among these multiplied affections, we meet with some whose immediate seat is in the stomach; others, in which the intestinal canal is chiefly, or almost entirely concerned; and a third description, where a faulty or deficient biliary secretion is the principal, if not the sole complaint. In the severer forms of these maladies, it is of no small

moment to the patient, or assistance to the medical attendant, that the kind of affection present be carefully and correctly distinguished, as by this means alone can the former derive with certainty, from professional exertion, that efficient and gratifying relief which it is, in general, so well calculated to afford.

1. In the first modification, furred tongue, clammy mouth, want of appetite, heart-burn, oppression at the pit of the stomach after meals, or sinking after a short abstinence, with nausea and rejection of food, are generally the most prominent symptoms. The mouth is very parched and dry in the morning, thirst prevails through the day, and the breath is fetid. The bowels are generally constipated, but very rarely purged: sometimes they are quite regular. The drinking of much liquid is particularly distressing. There is tenderness on pressure, and pain at the

pit of the stomach, and sometimes towards the left side. A puffy swelling also is occasionally to be felt at the former part, and, in protracted and severe cases, soreness may exist there, and a burning sensation, more or less constant, and extending to the right side. Morbid acidity in the stomach is very common, and a simple returning of the food soon after it is taken, especially of the dinner meal. The urine in general, soon becomes turbid, and deposits, on standing, a yellowish, or yellowish red sediment. It is not seldom small in quantity. The complexion becomes pale, but is very rarely sallow.

2. When the intestinal canal is the most affected part, the tongue, though sometimes furred, is generally tolerably clean, the appetite is sometimes unimpaired, often craving; the mouth is not parched or dry, thirst is not troublesome, neither is the breath fetid. There is no

oppression, except after an immoderate gratification of the palate, nor sinking at the pit of the stomach, nor vomiting; but the bowels are variously and much disordered, being either very confined or relaxed. The stools are highly unnatural and offensive, being either of a light brown colour, or green, or dark and black, pitchy, and frequently slimy. Diarrhœa is not seldom a very troublesome symptom of this form of the complaint, and sometimes exists from the commencement. Indeed, as I have elsewhere remarked, it seems that this affection is almost always dependent upon such disorder in the abdomen as has its seat chiefly, if not altogether, in the bowels, especially the lower bowels; and it, therefore, becomes a pretty sure criterion of the kind of disorder present. As thirst is not urgent, fluids are not indulged in, and when they are, they do not oppress and injure the

individual as they do when the stomach is principally affected. In the first modification, there may be considerable extrication of gas from the stomach; in this, the patient is annoyed with offensive flatulence in the bowels. When pain is present, it is felt in the bowels, most commonly in the right side, and about the umbilicus; and as, where the stomach is the part most affected, we have heat and viscid secretion in the mouth, so when the disorder exists chiefly in the bowels, the heat and irritation is most sensible and troublesome at the other extremity of the digestive tube, and the patient is often afflicted with piles, and sometimes with tenesmus, after a visit to the water closet. In general, I think the colour of the urine is high, and it deposits a highly coloured red sediment. The countenance is pale and sallow, sometimes yellow, which last colour often tinges the conjunctivæ also.

The pulse in both these forms is, in the commencement, usually unaffected; in severe examples, however, it is often irregular and intermitting, and when they assume an acute character, it is more or less hard. In chronic cases of long continuance, it becomes slow, small, and feeble, though regular.

3. Should the biliary organs be chiefly involved in the existing disorder, the chief symptoms are in general pain or uneasiness in the right side; constipation of the bowels, unhealthy alvine discharges, in which the white and dark perhaps predominate, a yellow thick fur on the tongue, and high pink coloured turbid urine. The appetite is usually more impaired than in the second form, but not so much so as in the first. The pulse varies, in a small degree only, from the healthy standard. In this, as well as in the second modification, diges-

tion appears to take place with tolerable facility and perfection in the stomach; but indigestion occurs below this organ, yet not, I think, to so great and uncomfortable a degree as when the bowels are more under the influence of disorder, than the liver. Upon the whole, it may be questioned, whether the sallowness and jaundiced hue of the countenance and eyes, is more frequent and visible here, than they are in the second form; but they are, at least in some cases, of a more steady character. In cases of some standing, there is generally a palpable enlargement and hardness in the right side, close to the margin of the ribs.

Amongst the multitude of the complaints under view, which we are every year called upon to witness, and to treat, there will ever be many, in which some of the symptoms will be found, that are noticed as denoting a different form of the

complaint, while others may be absent that properly belong to them; yet, according to my observation, it but seldom occurs, that the characteristic signs do not exist in such number, and with sufficient evidence, to enable us, upon proper consideration, to discover the particular kind of derangement which we are requested to prescribe for. In stomach disorder, the want of appetite, the oppression after eating, and the occasional pain in the epigastric region and left side, the very furred tongue, the frequent rejection of food, and the distress occasioned by drinking freely of liquids, will usually point to the seat of disorder pretty distinctly. In intestinal irritation, the highly disordered state of the bowels, the unnatural appearance and offensiveness of the motions, the intestinal pain and flatulence, the wasting and debility, while the appetite is good, and the tongue but little furred, clearly

shew, that the bowels are subject to the most sensible and greatest disorder. The affection of the liver is denoted by the greater degree of pain in the right side, up under the ribs, of tenderness on pressure there, which is sometimes attended with enlargement and hardness, by the pulse being almost unaffected, the urine pink-coloured, and sometimes, by the whiteness and tenacity of the motions. In this last form of the disorder, from the insensibility of the organ concerned, the symptoms are often obscure, and seldom point with great exactness to the nature of the malady.

The second appears to me the most common form of abdominal derangements, and it is also, in general, the most painful and obstinate,—that which is more extensive in its effects than any other, and which gives rise to more dangerous and intractable diseases. Next to it are the

disorders of the stomach ; and lastly, those of the liver. The disorders of the biliary organs, notwithstanding what is generally asserted to the contrary, I am constrained, after considerable reflection upon the subject, and an impartial and strict examination of it, to consider as very inferior to the others under view, in frequency, intensity, and importance.

In the bowels we recognise the seat of those internal disorders of the abdomen, which so generally prevail in autumn, and at other seasons of the year, and which are, for the most part, readily cured by aperients and absorbents. Here especially originate gout, scrophula, tic douloureux, and other frequent and painful chronic maladies, which we have to combat, at every stage of professional exertion ; and it is likewise here that those more alarming and fatal complaints—acute diarrhœa, dysentery, cholera morbus, hydrencepha-

lus, and perhaps fever, have their chief and primary seat and origin. The organization, and offices of the intestines, clearly explain the reason why they are so pre-eminently susceptible of irritation and disease, and serve at the same time to corroborate the fact. Their internal surface is of immense extent, and exquisite sensibility; it is an absorbing and secreting surface of the first importance in the animal economy; since the chymous pulp prepared in the stomach from the food, is here converted into chyle, absorbed, and carried into the circulating system, to nourish, sustain, and invigorate the whole, while the gross, innutritious parts are carried downwards for the purpose of being expelled. Here are retained, for a longer or shorter time, the bland and nourishing, as well as all the harsh and irritating liquids and solids which we take in the form of food, or medicine, or as a

gratification to the palate. They are applied immediately to its surface, and considering how unremittingly this is done, both in excess of quantity, and without regard to quality; how numerous are its blood-vessels and nerves, and therefore how highly sensitive it is, and how extensive its connexions; we are surprised that disorder of the stomach and intestinal canal is not more frequent and inveterate, rather than that it is so general. Besides, there is no other organ which is so much affected by the never-ceasing changes and vicissitudes in the atmosphere, to which we are constantly exposed, and from which we so greatly suffer in this climate; neither is there any one (except the stomach), that so immediately and intensely participates in mental affections, or irregular morbid action of any part of the nervous system.

“ That grave men should violently persist in directing large doses of calomel, (and I consider any dose above four grains to be large,) and order these doses to be daily reiterated in chronic and debilitated cases, is passing strange. Men, starting into the exercise of the medical profession from a cloistered study of books, and from abstract speculations—Men, wholly unaware of the fallibility of medical evidence, and unversed in the doubtful effects of medicines—may be themselves deluded, and delude others for a time; but when experience has proved their errors, it would be magnanimous, and yet no more than just, to renounce both the opinion and the practice.”

SIR ANTHONY CARLISLE,

London Med. Repository, Vol. I. p. 187.

ON
THE TREATMENT
OF
THE PREVAILING DISORDERS
OF THE
ALIMENTARY CANAL AND LIVER.

In the treatment of the severer disorders of the digestive organs, at this time so very prevalent in every part of Great Britain, mercury, in general practice, holds the first place; but in my experience, though it is sometimes an eligible medicine, it has not been generally the best, even in small quantities, and has been certainly injurious in the common way of administering it, which I consider injudicious in regard to the preparation, and deleterious in point of dose, and repetition.

Calomel is the favourite form of this mineral, but as it has a strong tendency to weaken and irritate the stomach and bowels, it is plainly not the most proper for common use in cases where this weakness and irritation already exist, and sometimes to a great degree. Mr. Abernethy remarks, “ In this state of the digestive organs, calomel, in small quantities, sometimes proves irritating:”— Again, “ The stomach frequently appears worse during the employment of mercury, whilst the stools are considerably better; I have, in such cases, discontinued the medicine.”* Sir A. Carlisle appears to have a marked objection to its common use. He observes that, “ it disorders the digestive powers of the stomach; and, in debilitated persons, the frequent employ-

* Observations on the Constitutional Origin and Treatment of Local Diseases, page 74 et 76.

ment of it sinks the strength, and provokes hæmorrhoids.”* Dr. Blackall, of Exeter, also expresses himself very strongly on this subject. “Parents,” says he, “have something to regret, who are so perpetually giving calomel to their children, without any distinction or care, as a common domestic remedy. And it is difficult to conceive on what view of the subject even practitioners proceed, who indulge in its use with less scruple than ever, with less attention as to dose, with less caution as to management, whilst they are observing and lamenting the daily increasing ravages of hereditary scrophulous disorders. It can hardly be, in the present day, from want of calomel, that such a taint is propagated.†” Indeed, the powerful and depressing effects of calomel on

* London Medical Repository, Vol. I. Page 186.

† Observations on Dropsies, page 245.

the whole nervous and vascular systems, unequivocally prove its poisonous qualities, and raise insuperable objections to its frequent employment.

The blue pill, or the *hydrargyrus cum creta*, in small doses, are much less irritating than calomel, and, therefore, are preferable when the use of mercury is indicated in these affections. The former are not only milder than the latter, but they seem to possess a greater power in correcting unhealthy actions in the alimentary canal. The first of them is undoubtedly sometimes an excellent remedy, and medical men will, in certain cases, find it superior to every other; but it is a question, whether in the major part of the maladies here treated of, any kind of mercurial preparation is necessary or expedient; for rhubarb is inferior to no medicine, in its power of changing to a healthy colour, the unnatural evacuations

common to such disorders, which change is the grand desideratum in their treatment. If it is not alone, at all times equal to this effect, a minute dose of the tartrate of antimony added to it, will rarely fail so to increase the efficiency of the rhubarb as to render it fully effectual. The value of this drug, as a corrector of unhealthy motions, is not sufficiently known and appreciated, while that of mercury is thought much too highly of. The latter often disappoints our expectations in the chronic affections of the liver, and alimentary tube, in this country, when rhubarb is perfectly successful; and we cannot be surprised at this, when we consider that the former are for the most part consecutive to the latter; in which case, the mercurial oxides are not likely to be generally the most appropriate and effectual. It has been judiciously observed that, as “when a disordered state

of the stomach is induced by the bile," (a circumstance that seldom occurs,) "no bitters will be useful; so, if an unhealthy condition of the bile is induced by the stomach, no blue pill will avail."*

It is a fact, of the truth of which any one may easily satisfy himself, that often after calomel and other mercurial preparations have been administered for some time, without avail in restoring highly discoloured stools to a healthy appearance, that rhubarb, upon the mercury being left off, will soon operate the desirable alteration; and I think, that the salutary change thus wrought, is more striking and perfect than what usually follows the effectual employment of mercury for the same purpose. This improvement, from the use of rhubarb, I have observed to be

* Abernethy—Manuscript Lectures, delivered at St. Bartholomew's Hospital.

particularly striking in the bowel complaints of children.

The tartrite of antimony is very much used on the continent, in bilious and gastric disorders, and is there considered fully capable of fulfilling the indications for which mercury is so commonly ordered in this country. It will be universally acknowledged, I presume, that this antimonial preparation is a remedy of no mean power, in cleansing the primæ viæ, and promoting a soluble state of the bowels, while it exerts a very salutary action on the whole cutaneous surface; if, therefore, the properties of rhubarb, either singly or combined with the emetic tartar, are really what they are now described, the common employment of mercury in these complaints, must be considered a great and lamentable error in English practice; since no practitioner is justified in prescribing, as a general remedy, a

medicine so truly poisonous as calomel, when one is at hand, adequate to effect the same purposes, without the risk of, in any way, injuring the general habit.

The experiments of M. Magendie, and the usual effects of emetic tartar upon the animal economy, prove that this substance exerts a specific influence on the mucous membranes of the alimentary canal and lungs, by which we are frequently able to accomplish very desirable objects in morbid invasions of these parts. A similar influence over these organs, is possessed by ipecacuanha. They both eminently promote expectoration, determine to the skin, and increase the peristaltic action of the bowels; and if an animal is killed by an over-dose of the former substance, death, in every instance, is found to be produced by violent inflammation of the substance of the lungs, and of the mucous membrane of the alimentary canal, extending

from the upper orifice of the stomach to the arms. The result is still the same, if the active principle of the tartarized antimony be thrown into the jugular vein, or be simply absorbed from any part of the body.* These phenomena account for the remarkable power often possessed by ipecacuanha and tartarized antimony over severe dysentery, and other unhealthy states of the bowels, which are too generally looked upon as *bilious*; and they corroborate, at the same time, the truth of the opinions given in this essay respecting the nature of dysentery, and of the other disorders, which I believe to be erroneously considered as essentially connected with hepatic affection. Dr. Balfour's Illustrations of the power of Emetic Tartar are likewise much in my favour.

* See M. Magendie's paper on the influence of Emetic Tartar on man and on animals.

But even allowing, as I do, that calomel, cautiously prescribed, is sometimes an eligible medicine in disorders of the digestive organs ; the doses in which it is commonly given, are more likely to produce and increase disorder, than to obviate it. Sir Anthony Carlisle looks upon any quantity above four grains as large ; I think the same of half that dose. Three, four, five grains, and even more, once or twice a day, for days or weeks, are doses now frequently ordered, when half a grain at bed time, or a grain three or four times a week, where this article agrees, will effectually promote healthy secretions in some very bad states of the assimilating viscera. Then, surely, fifteen or twenty times that quantity of a substance which operates as a powerful stimulant to all the digestive organs, and to every part of the body, cannot fail to be extremely injurious. Formerly, a grain or two of

calomel taken occasionally, was considered sufficient to accomplish the ends, for which quantities, so excessive, are now recommended for a long continuance. This unhappy increase has arisen from a common and natural error, that of expecting an increased advantage from an augmented dose; it being either over-looked, or disregarded, that all medicinal substances are, for the most part, only relative agents in the cure of disease, and that it is the dose which almost invariably determines their specific effect; so that, though a half grain, or grain of calomel, carefully repeated, is often powerfully curative, three, four, and more grains, administered at the same or shorter intervals, may be, and actually is, under ordinary circumstances, truly poisonous.

Perhaps it will be urged, that though a grain, or half a grain of calomel, administered three or four times a week,

will obviate some bad disorders of the abdominal viscera, it requires much more active doses, or, at least, that the grain should be frequently repeated, and longer continued, to remove a true liver complaint, that is, positive disease there. But this assertion is contrary to daily experience, and opposed to the opinions of some of the most esteemed practitioners of the present day. I have seen the constitutions of such persons irrecoverably ruined, by active mercurial courses; but, in no instance, did I ever witness a cure effected by this treatment. It is painful to recollect, that in disorganized livers, mercury carried to the extent of salivation, is commonly regarded as the sheet anchor, the fit and only remedy; for I will venture to affirm, that the far greater number of such cases, grow materially worse, rather than better, from such use of it; and that, this aggravation consists not merely in an

increase of the patient's weakness and morbid irritability; but that the existing disease in the liver becomes more extensive and inveterate. Among others, Mr. Abernethy, Dr. Blackall, Dr. Farre, and Dr. James Hamilton, Jun., bear a strong and weighty testimony against salivation under such circumstances, which it is highly desirable should be universally attended to.

The first of these able and respected writers, observes, “*Persons who are salivated have, as far as I have remarked, the functions of the liver and digestive organs constantly disturbed by that process. I cannot, therefore, but think that it is wrong to use mercury in hepatic affections to that extent which would disorder the functions of the liver, if they were previously healthy.* In the majority of cases, the disorder has existed for a long time, and has become habitual;

therefore, it is not likely to be cured suddenly. For this reason, we should adapt our treatment to the more rational expectation of effecting a gradual recovery, than a sudden cure.”*

Dr. Blackall’s general habits of discrimination, entitle his sentiments, on a question like the present, to considerable attention. In speaking of mercury, he says, “ On the scirrhus or tuberculated state of the liver, a frequent cause of dropsy in this country, I have seldom seen it make any impression. It would be somewhat in its favour to add, that it is universally safe. I dare not assert this, since I have seen, in such instances, the mercurial habit superadded by continued salivation, and then the disorder become more complicated, and more speedily fatal.”†

* Surgical Observations, before cited, page 77.

† Observations on Dropsies, page 70.

Dr. Farre, when treating of chronic enlargements of the liver, observes, “Patients suffering under the diseases above described, are not, as far as I have observed, benefited by the operation of mercury. Few medical men now attempt to cure, by these means, tumours, in the restricted sense of the word, at or near the surface of the body; but it is more especially true, that such efforts prove altogether fruitless, when directed to the cure either of the tubera circumscripta, or diffusa; for by the time that the most careful examiner can distinguish them, the progress of the disease has been already so considerable, that the mercurial action tends only to exhaust powers, which art will subsequently in vain attempt to restore.”*

Dr. James Hamilton, Jun. also, has

* Morbid Anatomy of the Liver, page 21.

remarked it to be his experience, that “the ordinary mode of exhibiting mercury for the cure of chronic hepatitis, in this country, not unfrequently hurries on the disease, or, by impairing the constitution, lays the foundation for paralytic affections; and it may be truly affirmed, that it thus often shortens life.”*

There are even some Indian practitioners of reputation, who, desirous of keeping in view the great difference existing between acute and chronic disease of the liver, have objected to the free use of mercury in the latter, though none are more sensible of its superior efficacy in the former state of disease. Dr. Dick, whom Dr. Saunders calls “a gentleman high in the medical profession, in Bengal, and of much practice in Calcutta,” says,

* Observations on the Use and Abuse of Mercury, page 79.

“ In recent attacks of liver complaints, after early bleeding, blistering, and the free use of laxatives, I never saw a case where suppuration came on, if mercury were freely used, and continued till the mouth was sore; and, if I be not much mistaken, it is in such cases that it has the best effects. In chronic cases, there is no fever, but only an obtuse pain in the side and shoulder, with a fulness in the side, and about the pit of the stomach, keeping up a constant uneasiness, mercury seems to me to have but little good effects; when used freely, it removes the symptoms at the time, but they generally return as soon as the mercury is left off.”*

Where an alteration exists in the structure of the liver, it appears to me, that if mercury is capable of making any impression on the disease, it is when exhi-

* Saunders on the Liver.

bited in small doses, at distant intervals. If a four-grain compound calomel pill, or five or six grains of the blue pill, given every night for some time, is not able to reach the complaint, this mineral will generally be ineffectual, and in augmenting the quantity till salivation is induced, we shall only be distressing and weakening the patient, without at all gaining upon his disease. Persons, in such a case, derive real advantage only from small undebilitating doses of mercury, that do not very sensibly affect the general system; and not from active, enervating courses, which disturb every healthy process. “ Though mercury be a remedy of signal benefit in altering the condition of action in the extreme vessels, it requires a very cautious and circumspect management. It requires to be slowly and gradually introduced into the system; *for the foundation of change, and the renewal of*

structure, depend upon a gradual, uniform, and extensive action upon diseased parts ; action, violent, irregular, and partial, deranges general health, but does not ordinarily affect the seat of the disease." *

Having considered it my duty, in the former part of this essay, to controvert some of Dr. Ayre's opinions on the pathology of the prevailing "*bilious*" disorders, it is with pleasure I remark, that his obscured pathological views do not lead to error in his practice, for no one can administer calomel more judiciously than he does. Its use, as an active purgative in these disorders, is condemned by him, it being his opinion that one grain, or less, in twenty-four hours, is sufficient in ordinary cases ; and therefore I may

* Jackson's Outline of the History and Cure of Fever, page 314. (1798.)

now quote his authority in support of the rules here laid down for the cautious exhibition of that medicine.

Mercury must be considered an admirable medicine on many occasions; it has enjoyed the confidence of the profession above three hundred years, and Mr. Pearson has justly remarked, that “not one medicine besides, derived from the animal, vegetable, or mineral kingdoms, has maintained its credit with men, actually employed in extensive practice, during a tenth part of that period,” which is a sufficient proof of its value. But the remarkable efficacy of this mineral in some cases, has led to its abuse; and this abuse seems to me so general, and is ordinarily followed by effects so permanent and destructive, as to call aloud for correction. Indeed, it may with propriety be questioned, whether mercury, notwithstanding its valuable curative powers, has not been

a source of more real injury to the constitution of Englishmen, than it has, or can be for years to come, of good. When I recall to recollection the numerous cases of ruined health, from the excessive employment of calomel, that has come to my knowledge, and reflect upon the additional proofs of its ruinous operation, which are still daily presenting themselves, I cannot forbear regarding it, as commonly exhibited, as a minute instrument of mighty mischief, which, instead of conveying health and strength to the diseased and enervated, is made to scatter widely the seeds of debility and disease of the worst kind, among persons of every age and condition.

Perhaps it is not exceeding the truth to say, that the mercurial oxides, especially calomel, are now daily given for the cure of disorders and diseases of every character, at every stage, and under every variety

of circumstances; and, what is fraught with the weightiest evil, without care or discrimination. It is not only the learned physician, or the well-educated apothecary, that are so extravagantly fond of this substance; but if the surgeon's dispenser, or apprentice boy, is called upon to take or to prescribe medicine, it is calomel; if the countryman wants physic, he, who formerly found jalap or salts to answer his purpose well, must now have calomel;—if the delicate young lady needs a pill, she sends for blue-pill or calomel;—and mothers, whether high or low, rich or poor, think nothing so good for their infants, as calomel, which they *pour in* with as little consideration as rhubarb or magnesia!

That so powerful an article, taken or administered by all descriptions of persons, without care or discrimination, as to the dose or disease, must be attended with

the most lamentable consequences, no one can with truth deny; for this medicine is not only a poison in excessive doses, but, as was remarked above, even in the ordinary doses of two and three grains, it is an active stimulant to the organs of digestion, and to the whole constitution. There is not another article in the *materia medica*, in common use, which so immediately, and permanently, and to so great a degree, debilitates the stomach and bowels, as calomel; yet this is the medicine which is sent for, and prescribed on every occasion; the most trifling, as well as the most urgent!

Its action on the nervous system, is demonstrative of its being an article in its nature inimical to the human constitution; since what medicine besides, in frequent use, will excite feelings so horrible and indescribable as calomel, and other preparations of mercury. An excessively

peevish, irritable, and despondent state of mind, is a well-known consequence of a single dose of this substance. Dr. Falconer, of Bath, in a paper where he forcibly animadverts on its abuse, observes, “ *Among other ill effects*, it tends to produce tremors, paralysis, and not unfrequently incurable mania. I have myself seen repeatedly, from this cause, a kind of approximation to these maladies, that imbibtered life to such a degree, with a shocking depression of spirits, and other nervous agitations with which it was accompanied, as to make it more than commonly probable, that many of the suicides which disgrace our country, were occasioned by the intolerable feelings that result from such a state of the nervous system.”*

* Transactions of the Medical Society of London, Vol. I. page 110.

To set the poisonous qualities of mercury in a still clearer light, I would here insert an extract from Dr. Hamilton's work, on the abuse of mercury, and also from Dr. Alley's observations on the hydragryria, an eruptive disease which is sometimes produced by this mineral. The former gentleman says, (page 24), " In a lady, (whom the author attended some years ago, along with his intelligent friend Dr. Farquharson), who had had such small doses of the blue pill, combined with opium, for three nights successively, that the whole quantity amounted to no more than five grains of the mass; salivation begun on the fifth day, and notwithstanding every attention, the tongue and gums became swelled to an enormous degree; bleeding, ulcers of the mouth, and fauces took place, and such excessive irritability and debility followed, that for nearly a whole month, her life was in the

utmost jeopardy." Dr. Alley observes, (page 40), that he has seen the mercurial eruption appear over the entire body of a boy about seven years old, for whom but three grains of calomel had been prescribed, ineffectually, as a purgative.

Some may think, that these instances prove only idiosyncrasy in the individuals affected, rendering them in an extraordinary degree obnoxious to the pernicious effects of this single substance; that such peculiar dispositions, in respect of a variety of really innocent medicines, are every day met with; and, therefore, that the conclusions here drawn, touching the deleterious properties of mercury, are inconclusive. But this cannot be consistently affirmed, because the above instances of the poisonous operation of mercury, are not like the others alluded to, of rare occurrence; on the contrary, they are common, and are only two out of a vast

number (not all equally bad) that have been, and are still daily witnessed, many of which are on record.

Dr. Hamilton, Jun. observes, "In several cases, the author has decidedly ascertained, that ulcerations of the villous coat of the intestines in infants, and young children, have been induced by the frequent repetition of doses of calomel." Does not this fact call upon the mother to abandon its use altogether in the disorders of her child, and to leave the administration of so dangerous a substance to the medical practitioner alone? And does it not demand more care and attention on our part, in prescribing this oxide, than has been of late observed?

There is a circumstance in the operation of mercury, which has hitherto been only hinted at in these sheets, but which is of no small moment, and ought to engage the serious and attentive considera-

tion of the profession, as well as of all unprofessional persons, who are in the habit of taking mercury themselves, or of giving it to their children,—I mean the permanency of its deleterious effects. An improper or excessive use of the generality of medicines is recovered from without difficulty; but it is not so when the same error is fallen into with the mercurial oxides. They affect the human constitution in a peculiar manner, taking an iron grasp of all its systems, and penetrating even to the bones, when incautiously employed, by which they not only change the healthy action of its vessels, and general structure, but impair and destroy its energies; so that their abuse is very rarely overcome. When the tone of the stomach, or intestines, or of the nervous system generally, has been once injured by this mineral, according to my experience, and I have paid considerable attention to the

subject, it could never after be restored. I have seen many persons to whom it has been largely given for the removal of different complaints, who, before they took it, knew what indigestion, and nervous depression, meant, only by the description of others; but since, they have become experimentally acquainted with both; they now constantly complain of weakness and irritability of the digestive organs, of frequent lowness of spirits, and impaired strength; of all which, it appears to me, they will ever be sensible. Instances of this description abound. Many of the victims to the practice are aware of this origin of their permanent indisposition, and many more, who are at present unconscious of it, might here find, upon investigation, a sufficient cause for their sleepless nights, and miserable days.

It is to be lamented that, in our day,

in severe cases, whether of disordered function, or actual disease, which resist the usual remedies prescribed under clear indications, salivation is frequently resorted to from some vague notion of its exerting an admirable, though inexplicable effect, when previous expedients fail; and thus, we have often every benevolent feeling of the mind called into painful exercise, upon viewing patients already exhausted by protracted illness, and whose only chance of recovery depended upon great care, and a soothing plan of treatment, groaning under the accumulated miseries of an active course of mercury, and by this, for ever deprived of perfect restoration. A barbarous practice, the inconsistency, folly, and injury of which, no words can sufficiently describe. I will venture to affirm, that the man who undergoes strong salivation in a chronic complaint, is never the same person, as to

strength and bodily feelings, after it, as he was before.*

Let it not be thought that I am insensible to the value of calomel, and other mercurial preparations, or that it is my desire to undervalue them. By no means. I have already said sufficient respecting them, to prove the contrary; but it is too often forgotten in medical practice, that they are of a nature unfriendly to our bodies, which is a well-established fact; and is, therefore, singly a proof that they ought to be exhibited sparingly, and with great caution. So far from being adapted to domestic use, calomel is a medicine,

* Except in cases of syphilis, to talk of the *cure* of a chronic disease by salivation, would be approaching to the absurd; but it is proper for me to remark, that it is quite different if it be excited to check an acute disease, especially in warm climates: here it is often the only and the effectual remedy.

which an unprofessional person should never presume to touch on his own opinion. When administered with care and judgment, it is sometimes invaluable, being capable of accomplishing the most desirable purposes; but in the hands of the uneducated and unskilful, it becomes a deadly weapon.

I have previously remarked, that in treating disorders of the digestive organs, we should be guided in a great measure by the seat of the affection; for, in severe cases of some standing, I am persuaded, that means well adapted to remove intestinal irritation, will generally fail to do good in a complaint of the stomach, and will often really aggravate it; and the reverse. Again, a treatment directed to obviate hepatic disorder, is well known frequently to occasion, at least, temporary inconvenience to the stomach; whereas, stomachic remedies have seldom any salu-

tary influence over real primary affections of the liver. Therefore, I shall distinctly, though concisely, notice the particular treatment suited to functional disorder of the stomach, of the bowels, and of the liver.

In treating those morbid affections of the digestive organs which centre in the stomach, there are two medicines which appear to me of great value. One is, the nitric acid, which, though it made great noise at one time in the cure of certain diseases, and not without reason, seems now almost entirely laid aside as an internal remedy; the other, is Brandish's caustic alkali, a medicine but little known, even for what it was originally recommended, (scrophula,) and not at all in the maladies under review.

With me, the nitric acid has repeatedly succeeded in restoring the assimilating viscera to the performance of their healthy

functions; when mercury, in every form, was either useless or injurious, and where no benefit accrued from the employment of other medicines. It acts as a tonic and alterative to the stomach and general habit, and is best adapted to the cure of that modification of indigestion in which the stomach and duodenum are chiefly concerned; where, along with a great deal of debility, there is heat and pain in the epigastric region, vomiting of food, want of appetite, burning in the hands and feet, or of the general surface, and especially when, with the existence of these symptoms, mercury has been freely thrown in, under the idea of there being a “*liver complaint*.” It strengthens the stomach and duodenum, and at the same time promotes their healthy secretions; and from being powerfully refrigerant, it proves a grateful, as well as an effectual medicine, when morbid heat, either par-

tial or general, internal or external, is a troublesome symptom. In slight and recent cases, it is of little or no service; the severe and tedious being those in which its powers are the most conspicuous, which renders it the more valuable.

It is too common a practice, in this form of the complaint, to give large and frequent doses of calomel as a purgative, and otherwise, when it never fails to sink the strength, and to excite the most horrible nervous sensations; here this acid will be found strikingly restorative. It may be taken in doses of six drops in the beginning, three times a day, in a large wine-glass-full of distilled water, sweetened with sugar, if agreeable, and gradually increased to eight or ten drops.

The mineral acids are considered by many eminent writers, as very useful in the advanced stages of indigestion; and the nitric acid has also been praised for

its effects in the chronic inflammation of the liver, occurring in India; but it has never gained that confidence among medical men, in the treatment of these complaints, that it merits, though its action on the skin, and its combining within itself the properties of a tonic, alterative, and refrigerant, clearly point it out as a valuable remedy. Dr. Scott considered it, in most instances, far superior to mercury in the chronic hepatitis of the East. Its power in correcting general and local morbid action is apparent, from its effects in restoring the constitution to a measure of its former health and strength, after it has been impaired by protracted or severe courses of mercury; and in healing the frightful ulcerations, so often the consequence of such courses, in which its efficacy is scarcely equalled by any known medicine. The proofs of its value, which were elicited during the controversy that took

place some years since respecting its anti-syphilitic powers, are sufficient to convince us, that it demands a greater share of attention from the profession ; and, from recent investigations into the nature of the ordinary syphilitic diseases, it is no longer doubtful whether mercury, or the nitric acid, is in general the safest and best remedy in these disreputable complaints.

I have known this acid, within a week, to restore, in a great measure, the skin of dyspeptics, from the dark, sallow hue, so common in such cases, to its natural appearance. In these patients, mercury had failed to produce this, or any other beneficial change ; but the alteration from the use of the acid has been so striking, as to excite the attention of their friends, and to be hailed by them as a certain sign of returning health, in which they were not disappointed.

The alkali recommended by Mr. Brandish, for the cure of scrophula, is often of signal service in stomachic weakness and disorder. It is eminently tonic to this part, and to the whole of the alimentary canal, and operates as a permanent stimulus to the whole system, increasing the appetite and strength, and exhilarating the spirits in a remarkable manner. All the alkalies are occasionally found of excellent use in these maladies; they are efficacious, correctors of morbid acidity, and have other effects on the stomach and bowels, that are very grateful and beneficial. Reasoning from the healthy changes wrought by it, I should say, the alkaline solution of Brandish possesses every good quality of the most powerful alkalies, and alkaline earths, in common use, without their objections; as it possesses no deleterious property, and may be continued for several months in suc-

cession, not only without injury, which cannot always be avoided in prescribing the former, but with increased advantage, both as a tonic and alterative.

Like the foregoing acid, it is of most service where the stomach is the chief seat of disorder; but instead of being applicable to the cases where heat is a troublesome feeling, it is in those in which coldness of the feet, chillness of the general surface, languor, fluttering at the pit of the stomach, and morbid acidity, are the most prominent symptoms, that it displays its full powers. The acid cools while it strengthens; this gently stimulates, and imparts an agreeable glow to the whole frame. It is likewise often of as much use in recent, as in old and bad cases; and it favours the natural action of the bowels.

Some persons who suffer from intestinal weakness and disorder, or the second modification of indigestion, derive much and

lasting advantage from this alkali; and, if I mistake not, it is much more exhilarating to the spirits, where it agrees, more strengthening also, and a more effectual alterative than the acid.

Every one will acknowledge how requisite it is to preserve and increase the strength, in advanced stages of these disorders, for which purpose it is common to prescribe light bitters and aromatics, in conjunction with other more efficient measures; on this account, the nitric acid, and the caustic alkali, lay strong claim to general confidence, from their being at once eminently tonic and alterative, supporting the strength more permanently, and in a way far superior to bitters and aromatics, at the same time that they are capable of removing the cause of the complaint.

Many ladies in the higher circles, who pass a great part of their time in large

towns and cities, and in over-heated rooms, who take little exercise, from these causes become pale and weak, lose their appetite, and are distressed with constipation of the bowels, and many uncomfortable sensations about the region of the stomach, particularly after eating; to such, the alkaline solution will prove a mild, but exhilarating and excellent tonic, that tends effectually to remove constipation, and to restore the energies both of body and mind.

At the commencement, it should be given in doses of a tea-spoonful morning and evening, and gradually increased to two tea-spoonfuls. Fresh beer, and milk and water, cover its taste the best; and whatever it is taken in, not less than three-fourths of a tea-cupful should be used as a vehicle, since the nature of the remedy requires it to be diluted with a considerable quantity of some fluid. If

beer be employed for this purpose, it should be quite fresh; and acids of every kind, with all sub-acid fruits, must be altogether avoided, while taking this alkali.*

I would recommend this alkali to the attention of persons who suffer from a long residence in a warm climate. The chief complaint of these invalids is, a deficient and irregular action of the stomach and bowels, which they will find the alkaline solution admirably adapted to remove.

The daily exoneration of the bowels is of essential importance in all disorders of the digestive viscera, but the use of aperients is not equally necessary in all, and, when called for, their composition should vary according to the seat of the com-

* As this alkaline solution is not generally sold by druggists, I have thought it advisable to mention, that it may be procured from Mr. Watts, chemist, &c. 478, in the Strand.

plaint. If the stomach be the organ chiefly, or entirely affected, and the bowels do not act regularly without, a very mild aperient only, must be employed, in the form of a pill, about every other night; the object of its use being to gain one or two sufficient alvine evacuations daily, and thus to empty the bowels without irritating them. Here full purging, especially with calomel, deserves reprobation; as it excites the most distressing sensations in the patient, and provokes every bad symptom.

The Cheltenham and Leamington waters are unquestionably of great utility, in many of the disorders now treated of, but I have reason to coincide in the truth of the opinions long since delivered by Dr. Saunders, that the valetudinary visitors to those places, may usefully be divided into three classes, viz. those who gain unequalled benefit from the waters; those

who obtain neither good nor harm; and those who suffer injury. The latter class are composed, principally, of persons who labour under stomach disorder, in every instance of which we may with certainty predict, that active aperients will be found extremely injurious; and this is, for obvious reasons, especially the case, if the medicine be suspended in a large quantity of water. Therefore, those suffering from abdominal disorder, who resort in search of health to the wells of those elegant and delightful towns, should be careful to ascertain the nature of their symptoms, before they venture on drinking the purging waters, lest they return worse than they went.

As a gentle aperient, when the patient cannot bear free evacuations, the following pills may be recommended for their mildness and efficacy:

℞ Extr: Colocynth: comp:

Pil: Rhei comp: āā ʒj

Pulv: Ipecac: gr. vj

Ol: Carui, gr. iv.

Saponis duri gr. xiv. M. ut fiant Pil:
xij, equibus sumantur una vel al-
tera, omni nocte, horâ decubitûs.

Or these,

℞ Aloes Spicat: ʒj

Scammoniæ Pulv: gr. xv.

Extr: Rhei ʒss

Bacc: Capsici pulv: gr. vj

Ol: Caryophill: gtt. v. Ft. pilulæ xv.
equibus sumat una vel altera, horâ
somni, pro re nata.

In stomach complaints, calomel is utterly inadmissible, being little better than an active poison. The blue pill is more safe, but rarely does any good, however judiciously prescribed. If long continued, it is well if it does no harm.

When the bowels are the principal seat of disorder, the symptoms of which are described at page 145, a plan of treatment is indicated very different from that just now described. Here tonics are of inferior moment, the grand indications being daily to carry down the residue of the food, and to excite healthy secretions from the internal surface of the intestines, which are fulfilled by the use of suitable aperients and alteratives. Mild aperient medicines may be administered freely, gentle and regular catharsis being generally of great advantage; for which purpose, one of the following draughts should be taken, for some continuance, once, or twice a day, as occasion requires:

R: Magnes: Sulphat:

Sodæ Sulphat: āā ʒiiss

Potassæ Carbon: ʒss M. ft pulvis,

ex ℥ss aquæ tepidæ, in impetu effervescentiæ, sumendus, cum Cochł: ampl: succi limonis recentis.

R: Magnes: Sulphat:

Sodæ Sulphat: āā ʒij

Ferri Sulphat: gr. ji

Mist: Camphoræ (tepid) ʒijss

M. ft haustus aperiens

R: Inf: Gentianæ comp: ʒj

Inf: Sennæ ʒiij

Potass: Tartr: ʒj

Tinct: Carldam: comp: ʒj

M. ft. haustus.

R: Decoct: Aloës comp: ʒj

Inf: Gentianæ comp:

Mist: Camphoræ āā ʒss

Sp: Ammon: Aromat: ʒss

M. ft. haustus, bis quotidie sumendus.

R:*Tinct: Rhei comp:

Tinct: Sennæ comp: aa ʒijss Ft haustus.

The above medicines, skilfully prescribed and varied, will very often prove both aperient and alterative; but it is generally advisable to order, at the same time, an alterative pill at bed-time. It is in this modification of the complaint, that the blue-pill has been so strikingly useful. The cases which Mr. Abernethy relates of its efficacy, appear to me clearly to have been examples of this class of disorders of the digestive organs, that is, of an affection of the mucous membrane of the bowels, over whose morbid secretions the blue-pill has sometimes great power. Four grains may therefore be taken every, or every other night; or a similar quantity of the compound calomel pill, which is

* Abernethy's Observations on the Constitutional Origin of Diseases, page 73.

an excellent alterative. Calomel, in any other mode than as an alterative, in small doses, ought to be studiously avoided.

As active purging is so general a practice in these maladies, and large doses of calomel are thought particularly efficacious, I would here remark, how contrary this mode of proceeding is to that of Mr. Abernethy, and Dr. Hamilton, Senior, whose writings are so much admired by the profession. Dr. Hamilton prescribes purgative medicines to excite, but *not to stimulate* the bowels, and he combines with them, generally, *unirritating* doses of mercury. Mr. Abernethy's practice is still more gentle; he says—"As I have found the lenient plan of treatment, (that of exciting the peristaltic action of the bowels, so as to induce them to clear out the whole of the residue of the food, without irritating them, so as to produce what is ordinarily called purging), particularly

successful, I have rarely deviated from it." (page 70).

If there exists considerable irritation and uneasiness in the bowels, and it is not relieved by the foregoing remedies, the oleum terebinthinæ may be used, according to the following formula, with great prospect of success.

R: Ol: Terebinthinæ, ʒiv

Vitell: Ovis q. s.

Sacchar: Alb: ʒvj

Ol: Menth: gtt. iij

Aq. Puræ, ʒv. M. cujus cochl: j. amplum, bis vel ter in die sumatur.

The power of this oil, in allaying irritation in the intestinal canal, and promoting the comfort and restoration of the patient, is sometimes truly astonishing.

The Cheltenham, or Leamington waters may be taken with great effect, in the second and third division which we have

made of the derangements of the assimilating functions. Many persons so afflicted have derived from their use the most substantial and permanent benefit. Besides, the air of these towns, particularly of the former, is most genial and salubrious, and likely to afford the dyspeptic, independently of the use of the waters, no ordinary assistance in shaking off his complaints. Unlike Bath or Brighton, the air is at once mild, clear, and highly restorative, possessing neither the dampness and closeness of the former, nor the cold, ungenial atmosphere of the latter. It is my opinion, and I have had sufficient opportunity of knowing, that no individuals suffering from severe stomach or bowel disorder, should ever seek health in the peculiar air of Brighton, that is if there is reason to apprehend any degree of visceral disease. It is a well-known fact, that many persons, on resorting to

this watering place, find an immediate change in their health for the worse, and some are rendered extremely unwell: where such circumstances occur frequently, there must be something in the atmosphere unfriendly and insalubrious.

In the third form of indigestion, or where the biliary organs are the parts chiefly occupied by disorder, the treatment differs but little, in the nature of the remedies necessary, from that just now described, as suitable to those cases in which the bowels are the organs most invaded. Perhaps, mercury is here the most efficient medicine, and it may be somewhat more freely indulged in, than in any other form of dyspepsia; but the aiming at even a slight salivation, my observation teaches me, is carrying the employment to an unnecessary and unwise length. Aperients and purgatives may also be more actively employed here; and

they should be composed principally of those articles which operate more especially on the liver, and first intestines. An occasional emetic promises to be sometimes beneficial, and the vapour bath seems to be more useful in hepatic derangement, than in either of the preceding forms of abdominal affection.

I have here freely acquiesced in the truth of the general sentiment, that mercury is the best remedy in primary disorder of the biliary secretion; but as the unnatural condition of this fluid is, for the most part, secondary, in order to assist in correcting it, I am inclined, for the reasons already mentioned in several parts of these observations, particularly at page 158, to prefer rhubarb for common use. Taking into consideration all kinds of disorders of the digestive organs, rhubarb is in general equally efficacious with mercury, in restoring the stools to their

natural colour; sometimes it is much more so, and, therefore, it is on the whole preferable for this purpose, since, unlike the former, it is incapable of injury. Accordingly, when the motions are much discoloured under the existence of the first or second form of dyspepsia, a couple of pills composed of four or five grains of powdered rhubarb, and two grains of hard soap, may be given every day, or as circumstances indicate. Frequently it will be advisable to order them to be taken an hour before dinner.

I have already written somewhat fully in favour of the virtues of rhubarb; notwithstanding, I cannot refrain from adding, that if they were duly prized, calomel and the blue pill would be in less use in the bilious disorders, (as they are called,) both of adults and infants. In the intestinal irritations to which the latter are subject, it is undoubtedly far superior to

calomel as a common remedy. The frequency of bowel complaints among young children, is evidently connected with the weakness of the intestinal canal at their early age;* there is then a deficiency of that tone or energy in the bowels, which, in persons of mature years, prevents the matters received into them from so soon suffering decomposition, and forming new and vicious combinations that irritate and disorder. Therefore, we might reason-

* A sentiment, quite opposite to this, has prevailed too much among some medical men; but the opinions of Magendie has every support that can be desired from reason, observation, and experiment; and now, that we see active mercurials so constantly and fearlessly given to infants, it may not be without effect to quote his words. "Instead," he says, "of considering the digestive organs of a new born child, or even those of one very young, as being gifted with an overplus of strength, we must view them as much weaker than they will thence forward become."

Magendie's Physiology, Vol. II. p. 117.

ably suppose, that a medicine, which readily promotes a healthy flow of bile, and strengthens at the same time that it evacuates, would be much better suited to the tender organs of a child than calomel, which, though often a valuable remedy, is of a very debilitating, enervating nature. It has frequently been asserted, that children require large doses of calomel, and bear them better than adults, which appears to me, an erroneous and dangerous sentiment. The mucus and slime that so thickly line their intestines, may frequently render a moderate dose, or doses, ineffectual, if uncombined with any other aperient; but those who, on this account, augment the quantity, and repeat it, until it operates powerfully, pursue, to say the least, an unsafe and injudicious practice. I repeat it, that there is no truth in the practice of medicine more apparent and certain, than, that the exhibition of large

and repeated doses of mercury, for the cure of chronic maladies, is highly inimical to the constitution of all persons: they ought, therefore, to be carefully avoided. None but cases of emergency, justify their use in the bowel complaints of children, the well-known but neglected formula, that combines rhubarb with the sulphate of potash, being fully equal to the removal of most of the ordinary disorders of this class.

So excellent a corrector is rhubarb of vitiated biliary secretions, and so efficient a deobstruent, that I have known five grains taken once a day for a month, to cause nearly the entire absorption of a large sarcocele, dependent upon great constitutional disorder. The bowels were always confined, the motions discoloured, the digestion bad, the flesh reduced, the strength greatly impaired; but this small

quantity of rhubarb, dissolved in water, and taken daily an hour before dinner, produced a healthy flow of bile, with a sufficient and consistent alvine evacuation every day; relieving the patient, in every respect, in a very unexpected and gratifying manner. Within four weeks, by this simple means, the general strength was much recruited, the appetite and flesh increased, the countenance was recovering fast its wonted healthy look, the local complaint appeared one-third of its former size, and had the patient persevered in the use of the rhubarb, I am persuaded he would have perfectly recovered: but, feeling himself so much better, he neglected to continue the remedy, and consequently suffered a relapse. The blue pill had been previously given, in this case, for some weeks, by a distinguished surgeon, but with results far inferior to what was after-

wards obtained by the employment of the rhubarb.*

Ipecacuanha is another article which operates directly, and in a very salutary way, on the internal surface of the stomach and bowels, and through them on the skin and biliary secretion, and which may advantageously be given to dyspeptics; either alone, or combined with rhubarb. An excellent alterative, tonic pill, is made by uniting one grain of ipecacuanha with two grains of powdered rhubarb, and two grains of soap; to be taken,

* Dr. Marshall Hall thinks very favourably of the virtues of rhubarb in the mimoses. He observes, (page 94 of the second edition of his Essay), that he has found rhubarb and magnesia of great use, when there was "diarrhoea, with scanty, fetid, and dark-coloured motions."—"Indeed, in all cases where the more active purgative medicines have been employed in the commencement, rhubarb appears to be particularly adapted, from its tonic properties, to complete the cure."

with the other remedies, twice or thrice a day.

In habitual constipation of the bowels, (where there may be no particular indisposition), it is sometimes an excellent practice to take regularly once a day, or every other day, for some time, a small quantity of gentle, opening medicine. I have met with some costive persons, who derived manifest relief from this means, after trying many other plans recommended to them without benefit. Castor oil is a mild and effectual aperient, and very suitable for such a purpose; or a gentle opening pill may be employed. One patient, who was habitually costive, and was always ailing, complaining of general debility, with indigestion, became a new creature, from taking a tea-spoonful of castor oil every night at bed-time, for several months. Before this, she was subject to frequent painful and alarming

bilious attacks, which afterwards quite left her.

The constant use of brown, instead of white bread, is another measure that may be resorted to for obviating a constipated habit of body, and mostly with complete success. Upon the whole, I think this plan preferable to the fashionable one of using the glyster machine. Using honey, once or twice a day, instead of butter, answers the purpose with some individuals. Many invalids are, from day to day, tormented with costiveness, for a series of years, and purely for want of management. The rejection of all articles of diet they find by experience to be constipating, and the indulging in those which have no tendency of this kind, and in those which relax the bowels, with the use of brown bread, and exercise, will, I am persuaded from observation, be found fully equal to remove this habit.

If the use of brown bread is not found equal to the desired effect, the patient will act wisely to have his bread made at home, of one-third rye, and the remainder of brown flour.

The tepid bath merits attention in the treatment of disorders subsisting within the abdomen. Till lately, a false idea prevailed among unprofessional persons, that the warm bath is weakening; but this is now well known to be erroneous, for, when properly used, it generally proves very refreshing and strengthening. From 90° to 95° is the best range of heat for dyspeptics, and the proper time for resorting to the bath is in the morning, between breakfast and dinner; the patient using it three times a week, and remaining in it from twenty minutes to half an hour, according to his feelings, which ought to be comfortable on his coming out. Ninety, or ninety-one degrees, usu-

ally agrees best with those who have a good measure of strength; and they find an advantage from indulging in a gentle walk or ride after it. When little benefit ensues from the use of the tepid bath, the vapour bath may be of more service. Its use is often extremely beneficial to this class of patients: their skin is always dry, and harsh, or loaded with an unhealthy perspiration, and the vapour bath, by the discharge which it excites from the whole cutaneous surface, tends to restore the natural secretions, and, in an eminent degree, to relieve the internal viscera. It may be used for ten minutes, at 110°, about once a week.

Sponging the whole surface of the body regularly every morning with tepid water, the patient rubbing himself dry after it with a coarse towel, and continuing the rubbing for ten minutes at least, is another remedial measure that may be resorted to,

with every prospect of gaining from it great advantage.

Horse exercise is, in most instances, a powerful auxiliary to diet and medicine, in the removal of the severer forms of the disorders of the digestive functions. I believe it is attended with the greatest advantage, where the stomach is the organ chiefly molested.

When pain or uneasiness occurs in the stomach after dinner, or any other solid meal, it is a pretty certain sign that the patient takes too much; however, the drinking of a little warm water, to which some tincture of ginger has been added, will seldom fail to afford immediate relief. About half a tumbler full may be drank, with a tea-spoonful of the tincture of ginger put into it, and a little sugar to make it palatable. This mixture may be continued for some time daily, and often with great advantage. In some cases, it appears

to have not merely a palliative effect, but to be of permanent benefit ; and we are not surprised at this, when we recollect of how great service the warm waters of Bath and Buxton sometimes are in indigestion. Dr. Saunders thought highly of tepid water as a remedy in this complaint, and questioned whether drinking the water at the celebrated springs of Buxton, would, upon trial, be found more efficacious in these complaints, than the regular use of the same quantity of any pure water, heated to the same temperature.

When that tenderness and fulness, treated of at page 24, is present, the application of leeches to the affected part should never be neglected. Six or eight may be employed to draw blood from the seat of pain, once a week, for three or four weeks, if this symptom is not removed in a shorter time.

If great weakness of the knees exists as a troublesome symptom accompanying indigestion, which is frequently the case, the flesh brush may be resorted to, morning and evening. Regular friction of the region of the stomach and bowels also, twice a day with this brush, is a measure that I would strongly recommend, as very conducive to the promotion of their regular and healthy action, and to the removal of costiveness.

But of all the means which attract notice, in the treatment of severe disorders of the alimentary organs, there are none that demand more careful attention than diet. Many bilious and dyspeptic invalids may cure themselves by it alone, provided they regulate the bowels by an occasional aperient, while few will gain any great and lasting advantage from either of the remedies treated of above, or even the most judicious combination of them, if

this be neglected. The reason of this is obvious. In taking food, we necessarily apply different substances, both solid and liquid, to the very seat of irritation and disorder, which is the stomach and bowels; and therefore nothing can be plainer than, that if we constantly put into those receptacles, either a larger quantity of meat and drink than can be easily digested, or a less quantity of substances which are of an indigestible and stimulating nature, we shall inevitably maintain irritation, and perpetuate disorder, in spite of the most powerful remedies, and the best regulated exercise. It behoves then all such persons, especially those suffering from the severer forms of these maladies, to be particularly attentive to their diet. It is certain, that many have been cured solely by a strict attention to it, after various means, prescribed by different physicians and surgeons of ability were tried without effect.

In these affections, and indeed in all “ chronic diseases, it is common for patients to complain, that they derive no permanent advantage from any thing; for, in fact, as soon as ever the disease is lessened or removed, they are constantly liable to renew it, either by generating too much blood, or by creating some irritation, from irregularities in diet. It is not enough that, having once made an impression on the symptoms of a chronic disorder, we should rest content with a sort of truce, in which it is apt to make frequent, and at last formidable returns; but we should endeavour, by the most peremptory enforcement of a proper regimen, and by maintaining a regular action on the bowels, wholly to dislodge the lurking mischief.*”

* Dr. Armstrong's Illustrations of Typhus Fever, 3d edition, page 445.

The grand maxim, with regard to diet, is to eat and drink sparingly, at stated intervals, and of food the most digestible, and that agrees best with the individual. No bilious or dyspeptic subjects should eat more than four times a day), except it be a small biscuit occasionally, to allay temporary uneasiness in the stomach), and those periods should be, as near as possible, at regular intervals of four or five hours; say, at eight, twelve, five, and nine o'clock.

Where a considerable degree of hardness exists in the pulse, with tenderness, on pressure, at the pit of the stomach, a diet wholly vegetable, and even a total abstinence from wine, must for the most part be observed, and is strikingly beneficial. The best vegetables are turnips, brocoli, french beans, and potatoes; no other should be taken. Light, plain puddings are allowable, and cocoa, or thin

chocolate made with water, should be preferred to tea. Coffee ought to be wholly forsaken. In all cases, plain biscuit is preferable to white bread, but well-baked brown bread is better than either. There is a farinaceous preparation sold in London, called biscuit powder, which is nourishing and easily digested, and therefore well adapted to all cases of derangement in the stomach and bowels.

In the greater number of cases, the hardness of pulse, noticed above, is not present, and then animal food is the best. Of this only tender mutton, venison, beef, lamb, or chicken, can be taken with safety and advantage, of which a small quantity roasted and little-done may be taken once or twice a day. Of course all salted and dried meats are inadmissible, and boiled fresh meat of any kind is not quite free from objection in severe indigestion. Full grown tender mutton is unquestion-

ably the most digestible, and the best. Some persons derive benefit from a little animal food at breakfast, instead of butter; with others it does not agree; when it is relished, and digests well, I think it generally advisable. Every kind of fish is bad, and must be altogether avoided. In common language, fish is called a *light* article of diet, but it is an error to suppose that it is easy of digestion; every person labouring under disorder of the stomach, if he is attentive to his feelings after eating it, will find that it is quite the reverse. It is given to patients convalescent from acute diseases, in preference to flesh, not because it admits of a more ready solution in the stomach, but on account of its exciting less heat and fever. Food, both vegetable and animal, done a second time, is very objectionable. The supper should be very light, and of small quantity, and consist of a roasted

apple, or potatoe, with a biscuit, or an egg lightly boiled.

When the stomach is much weakened and disordered, there are few things which distress and injure the patient more than an unrestricted indulgence in drinking unstimulating fluids. All slop fluids are much more difficult of digestion than solids, and a weak stomach is quite incapable of digesting even the ordinary quantity which is taken in health with satisfaction and benefit. It is for this reason, that all broths and soups are injurious to dyspeptics, and that drinking a little freely of soup, tea, and the like, will sometimes throw such persons almost into agonies. If these patients consult their feelings, they will be immediately sensible how much it is to their comfort and advantage, to abstain from them as much as possible. Whatever diluent is taken in the morning and evening, I would recom-

mend the patient not to exceed, in quantity, a common breakfast cupful.

Sometimes, a little white wine is useful after dinner, or if that turns acid after being swallowed, a little weak brandy and water may be used as a substitute. Mild beer, however, of a moderate strength, is what generally agrees better than either wine or brandy. To quench thirst in the intervals of meals, nothing can be found equal to soda water; it is exceedingly grateful, and effectual, and that made with the soda powders appears to me to be much better than the bottled water. In the summer, it is particularly useful, and should then be constantly drank in preference to any other liquid.

The food should be well masticated, and quietness, with rest, observed for at least half an hour after each meal. The horizontal posture on the sofa is recommended, by some, after meals, but I be-

lieve, that when the stomach is weak and disordered, digestion almost always proceeds much better in a sitting, than in a recumbent position.

FINIS.

